Interim report.

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INTERIM REPORT

OF THE

ROYAL COMMISSION ON WHISKEY AND OTHER POTABLE SPIRITS.

Presented to both Houses of Parliament by Command of His Majesty.

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1908.

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1902 EDWARD, *R. & I.*

EDWARD THE SEVENTH, by the Grace of God, of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas King, Defender of the Faith, to—

Our right trusty and well-beloved Councillor Henry, Baron James of Hereford, Knight Grand Cross of Our Royal Victorian Order; and

Our trusty and well-beloved—

Laurence Nunns Guillemard, Esquire, Companion of Our Most Honourable Order of the Bath, Deputy Chairman of the Board of Inland Revenue;

Walter Ernest Adeney, Esquire, Doctor of Science, Fellow of the Chemical Society;

John Rose Bradford, Esquire, Doctor of Medicine, Doctor of Science, Fellow of the Royal Society;

Horace Tabberer Brown, Esquire, Doctor of Laws, Fellow of the Royal Society;

George Seaton Buchanan, Esquire, Doctor of Medicine, Inspector of Foods to the Local Government Board of England;

John Young Buchanan, Esquire, Master of Arts, Fellow of the Royal Society; and

Arthur Robertson Cushny, Esquire, Doctor of Medicine, Master in Surgery, Fellow of the Royal Society; Greeting!

Whereas We have deemed it expedient that a Commission should forthwith issue to inquire and report:—

1. Whether, in the general interest of the consumer, or in the interest of the public health, or otherwise, it is desirable—

(*a*) To place restrictions upon the materials or the processes which may be used in the manufacture or preparation in the United Kingdom of Scotch Whiskey, Irish Whiskey, or any spirit to which the term whiskey may be applied as a trade description;

(*b*) To require declarations to be made as to the materials, processes of manufacture or preparation, or age of any such spirit;

(*c*) To require a minimum period during which any such spirit should be matured in bond; and

(*d*) To extend any requirements of the kind mentioned in the two sub-divisions immediately preceding to any such spirit imported into the United Kingdom.

2. By what means, if it be found desirable that any such restrictions, declarations or period should be prescribed, a uniform practice in this respect may be satisfactorily secured:

and to make the like inquiry and report as regards other kinds of potable spirits which are manufactured in or imported into the United Kingdom.

Now know you that We, reposing great trust and confidence in your knowledge and ability, have authorized and appointed, and do by these Presents authorize and appoint you, the said Henry, Baron James of Hereford (Chairman); Laurence Nunns Guillemard; Walter Ernest Adeney; John Rose Bradford; Horace Tabberer Brown; George Seaton Buchanan; John Young Buchanan; and Arthur Robertson Cushny, to be Our Commissioners for the purposes of the said inquiry.

And for the better effecting the purposes of this Our Commission, We do by these Presents give and grant unto you, or any three or more of you, full power to call before you such persons as you shall judge likely to afford you any information upon the subject of this Our Commission; to call for information in writing; and also to call for, have access to and examine all such books, documents, registers and records as may afford you the fullest information on the subject, and to inquire of and concerning the premises by all other lawful ways and means whatsoever.

And We do by these Presents authorize and empower you, or any of you, to visit and personally inspect such places as you may deem it expedient so to inspect for the more effectual carrying out of the purposes aforesaid, and to employ such persons as you may think fit to assist you in conducting any inquiry which you may hold.

And We do by these Presents will and ordain that this Our Commission shall continue in full force and virtue, and that you, Our said Commissioners, or any three or more of you, may from time to time proceed in the execution thereof, and of every matter and thing therein contained, although the same be not continued from time to time by adjournment.

And We do further ordain that you, or any three or more of you, have liberty to report your proceedings under this Our Commission from time to time if you shall judge it expedient so to do.

And Our further will and pleasure is that you do, with as little delay as possible, report to Us, under your hands and seals, or under the hands and seals of any three or more of you, your opinion upon the matters herein submitted for your consideration.

And for the purpose of aiding you in your inquiries We hereby appoint Our trusty and well-beloved AUBREY VERE SYMONDS, Esquire, of the Local Government Board, to be Secretary to this Our Commission.

Given at Our Court at *St. James's*, the seventeenth day of February, one thousand nine hundred and eight, in the eighth year of Our Reign.

By His Majesty's Command.

H. J. GLADSTONE.

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ROYAL COMMISSION ON WHISKEY AND OTHER POTABLE SPIRITS.

INTERIM REPORT.

TO THE KING'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY,

We, the Commissioners appointed by Your Majesty on the 17th of February, 1908, to inquire and report:

I. Whether, in the general interest of the consumer, or in the interest of the public health, or otherwise, it is desirable—

(*a*) To place restrictions upon the materials or the processes which may be used in the manufacture or preparation in the United Kingdom of Scotch Whiskey, Irish Whiskey, or any spirit to which the term whiskey may be applied as a trade description;

(*b*) To require declarations to be made as to the materials, processes of manufacture or preparation, or age of any such spirit;

(*c*) To require a minimum period during which any such spirit should be matured in bond; and

(*d*) To extend any requirements of the kind mentioned in the two sub-divisions immediately preceding to any such spirit imported into the United Kingdom:

availing ourselves of Your Majesty's permission to report our proceedings to Your Majesty from time to time if we should think it expedient to do so, desire to submit to Your Majesty the following preliminary Report.

We have held 22 sittings and examined 74 witnesses. Certain of the Commissioners have visited distilleries in Scotland and Ireland, and have thereby obtained much valuable information.

Whilst the labours of the Commissioners are by no means terminated, we have arrived at certain conclusions, which we now humbly submit to Your Majesty as follows:—

1. That no restrictions should be placed upon the processes of, or apparatus used in, the distillation of any spirit to which the term "whiskey" may be applied as a trade description.

2. That the term "whiskey" having been recognised in the past as applicable to a potable spirit manufactured from (1) malt, or (2) malt and unmalted barley or other cereals, the application of the term "whiskey" should not be denied to the product manufactured from such materials.

We reserve for further consideration the question of the advisability or otherwise of attaching special significance to particular designations such as "Scotch Whiskey," "Irish Whiskey," "Grain Whiskey," and "Malt Whiskey;" of placing restrictions upon the use of such designations as trade descriptions; or of requiring such designations to be used in connection with the sale of whiskey.

We ask Your Majesty's permission to postpone stating in full the grounds upon which we have arrived at the above conclusions until we submit our final Report upon all the matters referred to us.

We also submit to Your Majesty the Minutes of Evidence given before us.

We think that the immediate publication of this Report is desirable.

All of which we most humbly submit to Your Majesty's most gracious consideration.

(Signed) JAMES OF HEREFORD, *Chairman.*
L. N. GUILLEMARD.
W. E. ADENEY.
J. R. BRADFORD.
HORACE T. BROWN.
G. S. BUCHANAN.
J. Y. BUCHANAN.
ARTHUR R. CUSHNY.

AUBREY V. SYMONDS, *Secretary.*

24th June, 1908.

ROYAL COMMISSION ON WHISKEY AND OTHER POTABLE SPIRITS.

MINUTES OF EVIDENCE

TAKEN BY THE

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ON

WHISKEY AND OTHER POTABLE SPIRITS

WITH

APPENDICES.

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MINUTES OF EVIDENCE

TAKEN BY THE

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ON

WHISKEY AND OTHER POTABLE SPIRITS

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ROYAL COMMISSION ON WHISKEY AND OTHER POTABLE SPIRITS.

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MINUTES OF EVIDENCE

TAKEN BEFORE

THE ROYAL COMMISSION ON WHISKEY AND OTHER POTABLE SPIRITS.

FIRST DAY,

Monday, 2nd March, 1908,

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. ARTHUR JOHN TEDDER, called.

Mr. A. J. Tedder.

2 March 1908.

1. (*Mr. Guillemard.*) What is your position in the Excise Service?—Chief Inspector of Excise.

2. You have had a considerable length of service I believe?—Thirty-six years.

3. Perhaps I had better explain to you the sort of evidence the Commission wish to hear from you to-day. It is what I may call explanatory evidence. Our reference covers the case of all potable spirits, and we have called you before us so as to know as a preliminary step what the different spirits are, what materials they are made from, what are the processes of manufacture, and then, taking the finished product, what is the supervision that is exercised by the Excise from the manufacturer on the way to the consumer.—I quite understand.

4. The Commission do not propose in examining you to-day to put any questions on the subject of public health, or from the point of view of the consumer getting exactly what he wants. Of course the Excise are not primarily concerned with those two questions. No doubt questions will be asked later about them, but they will come more suitably later on when more evidence has been heard. Could you tell us what your experience of distillery operations has been? I know it has been extensive?—I have been in close touch with distilleries for the past thirty years. At the present time, as you know, I am the principal adviser to the Commissioners of Inland Revenue on distillery questions.

5. Now we come to the different sorts of spirits. I think it would be most convenient if you would start by giving a definition of what British spirits are?—British spirits are spirits liable to a duty of Excise; that is to say, all spirits made in this country.

6. Simply regarded as spirit?—Yes.

7. The object of the Excise being to levy so much revenue on so much spirit and nothing else?—Exactly.

8. Could you give a definition of plain spirits?—Plain spirits means any British spirits which have not had any flavours communicated thereto or ingredient or material mixed therewith.

9. Will you give a definition of British compounds?—British compounds means spirits altered in character in re-distillation or which have had any flavours communicated thereto or ingredient or material mixed therewith.

10. How would you define spirit at proof strength?—The strength of proof is that as ascertained by Sykes' hydrometer. It is defined in the Spirits (Strength Ascertainment) Act of 1818 as "spirit which at a temperature of 51° F. weighs exactly twelve-thirteenth parts of an equal bulk of distilled water." Practically it is a mixture of almost equal parts of absolute alcohol and water.

11. What is the rate of duty on British spirits?—11s. per proof gallon.

12. Perhaps you can give us some figures as to the amount of net duty received on British spirits for the last year for which you have available figures. No doubt you will be able to hand in something more full later on, but you might give those figures now in evidence?—For the last financial year: England, £6,765,884; Scotland, £6,902,431; Ireland, £4,076,810; the total is £17,745,125.

13. And that duty is paid, is it not, at the time when the spirit leaves the control of the Revenue authority?—Yes.

Mr. A. J. Tedder.

2 March 1908.

14. Now I would like to ask you what is the quantity of proof spirit made during the same period?—In England there were made 13,424,854 proof gallons; in Scotland, 24,839,870 proof gallons; Ireland, 12,053,184 proof gallons. Total, 50,317,908 proof gallons.

15. When that spirit was made what would its destination be?—Some would go into consumption at once.

16. A small quantity I suppose?—A small quantity, comparatively. A small quantity would go direct for drinking purposes, but what we call consumption means more than that.

17. We will come to that later?—Some would go for exportation; the great bulk of it would be bonded and some would go for methylation.

18. What is the estimated consumption per head of the population? I might say with regard to that that though that is the usual form of words I think it is a little confusing, but that will probably come out in your answer?—It works out at ·74 of a proof gallon.

19. (*Chairman.*) That is for the whole population?—Yes. This figure, it may be explained, is arrived at by dividing the total number of gallons of spirits on which duty was paid, when the spirits went out of Revenue control, by the estimated population corrected to date, due allowance being made for the duty-paid spirits which came back into Revenue control and on which drawback was paid on their being re-warehoused for exportation. It is only a rough approximation.

20. (*Mr. Guillemard.*) Your answer brings out the point I wanted to bring out, which was this: when you say consumption per head of the population it does not necessarily mean that each particular throat in the country has drunk so much, but it is the amount which has passed out of Revenue control divided by the total population?—Yes.

21. Consumption includes keeping in cellars, and stock, and everything of that sort—it does not mean drunk?—No. Of course there would be a considerable quantity of it lost by evaporation and other forms of waste, and some of it would be for other than potable purposes.

22. I put that point because I often see in the newspapers the consumption is treated as if it actually meant the amount drunk, which is not necessarily so. That is so, is it not?—That is so.

23. Would you give us some particulars, which is coming close to our Inquiry, of the actual number of distilleries in the different parts of the United Kingdom which are working now?—Last year, *i.e.*, last distilling year, which I might explain is the year ending 30th September, there were in England 8, in Scotland 150, and in Ireland 27. There were, in addition, a number which were not working, viz., 1 in England, 12 in Scotland, and 3 in Ireland. (*See Appendix A, I.*)

24. Temporarily not working?—Temporarily. Some of them, will however, never work again, I think.

25. Would you be able to classify those according as they work by pot still or patent still, or by pot and patent still—that would be three classes?—In England there was no distillery with pot stills only. There were three having pot and patent stills, and five having patent stills only. In Scotland there were 137 with pot stills, three with pot and patent stills, and ten with patent stills. In Ireland there were 18 with pot stills, seven with pot and patent, and two with patent stills. (*See Appendix A, I.*)

26. (*Dr. Horace Brown.*) Those are not necessarily separate businesses—they are separate distilleries?—They are separate distilleries. You mean to say one distiller may have two or three distilleries?—Yes.

27. That is counted as two or three as the case may be?—Yes.

28. (*Mr. Guillemard.*) Are those figures for the present year?—They are for the last distilling year.

29. Is the number in any particular class increasing or decreasing over a period of recent years?—Of recent years there has been very little increase.

30. I do not know whether you have the information, but would you be able to put in a table showing in regard to those three classes the numbers for, say, 10 years?—Yes. (*See Appendix A, II.*)

31. (*Dr. Horace Brown.*) And the amounts turned out by each individual distillery?

32. (*Mr. Guillemard.*) Would you be able to state the amounts turned out by each distillery?—That is coming rather close to confidential information.

33. (*Dr. Adeney.*) Do you think 10 years would be a sufficient time to go back? What I wish to know is this: was there any sudden increase of the consumption of potable spirits at any time in the last few years? Has the growth of consumption of potable spirits been a gradual growth?—It has been decreasing.

34. (*Mr. Guillemard.*) Now we come to a very important point. Would you tell us all you are able to (it is very important, so we want it fully) with regard to the kind of materials that are used in the manufacture of spirits in the United Kingdom—if possible in the three divisions for the last completed distilling year?—I will give the different kinds of materials first as they come, and the quantities afterwards. Distilleries in this country use these materials: malt, unmalted grain (which includes maize, barley, oats, rye, and a little wheat), rice, molasses, glucose, sugar (an infinitesimal quantity of sugar was used last year), and various other materials, such as sago, tapioca, bran, and malt commings. These last two really are not spirit-producing materials; they are used principally, I believe, for promoting fermentation.

35. That is a large list. I conclude from its size that there is no legal restriction as to the materials from which you may manufacture spirit if you want to?—None, so long as the specific gravity of the worts produced can be ascertained by the prescribed saccharometer.

36. That, being, of course, a Revenue consideration?—Yes.

37. Now we come to the quantities of the different materials used in the United Kingdom, and there you will be able to give the three countries separately?—Yes. The quantities of different materials used in the last distilling year, commencing with Scotland, were: malt, 847,530 qrs.; unmalted grain—I may say we have not got the separate figures for the different kinds—497,798 qrs.; besides this there were 840 cwts. of bran, and a small quantity, 70 cwts., of malt extract.

38. You said the bran was principally used to promote fermentation?—Yes, by the yeast manufacturers. Then in England there were used: 81,289 qrs. of malt; 253,314 qrs. of unmalted grain; 950 cwts. of rice; 1,065,509 cwts. of molasses; 408 cwts. of glucose; 2 cwts. of sugar; 1,541 cwts. of bran; 3,593 cwts. of sago; 1,393 cwts. of tapioca; and malt commings—these are the rootlets from the malt, after the malt has been dried on the kiln—6,237 cwts. Then in Ireland there were used 215,151 qrs. malt and 384,963 qrs. unmalted grain. There were no other kinds of materials used in Ireland.

39. Nothing at all?—Nothing else.

40. Then neither in Ireland or Scotland do you get anything except malt and unmalted grain, except a certain amount of bran which is used in Scotland for fermentation, and a negligible quantity—70 cwts.—of malt extract in Scotland?—That is so.

41. Could you give us any estimate of the production of spirits from each class of material in the most convenient form to yourself?—Would you like the total of the materials used? Of course, you have them there by adding them up; but I can give you the total.

42. I should like the totals?—I have got them under four heads—malt, unmalted grain, other materials, and molasses. Malt, 1,143,970 qrs.; unmalted grain, 1,136,075 qrs.; other materials, 15,034 cwts.; molasses, 1,065,509 cwts.

43. Would you come now to the estimated production of spirits for each class of materials?—We estimate that from malt the distiller can produce 16½ gallons per quarter.

44. (*Dr. Horace Brown.*) Per quarter of how many pounds?—We usually take it at 42 lbs. per bushel, but

we are not very certain as to how the distillers take it. There is no statutory weight; 42 lbs. is the average.

45. 336 lbs. per quarter?—Yes. From unmalted grain 20 gallons. That would be heavier.

46. 480 lbs. per quarter?—I know as a fact that some of them make it up to 60 lbs., and some of them take it at 56 lbs. These estimates are really very rough. Then sago, per cwt., should produce 7½ gallons; tapioca and rice the same; sugar, we consider, should produce 10 gallons per cwt.; molasses only 6; glucose, 8·4 gallons. I have got a table here showing the percentage of total estimated produce derived from the different materials, which should be rather interesting.

47. (*Mr. Guillemard.*) Perhaps you would read it first and then put it in?—Taking England first; the estimated produce from malt was 10·4 per cent. of the total quantity of spirits made. Unmalted grain, 39·8; molasses, 49·7; glucose is really scarcely worth considering—it is ·02. In Scotland, 58·4 per cent. from malt and 41·6 per cent. from unmalted grain. Ireland, 31·6 per cent. from malt and 68·4 per cent. from unmalted grain. The United Kingdom stands thus: malt, 39·3; unmalted grain, 47·4; molasses, 13·3; and glucose, which is not worth mentioning, ·008.

48. Could you give us some information classifying distilleries according to the materials they use? For instance, tell us the number that use malt only, and the number that use malt and unmalted grain, and so on?—In England there were no distilleries which used malt only. There were three which used malt and unmalted grain, and there were five which, in addition, used molasses. In Scotland there were 142 using malt only, and eight using malt and unmalted grain. In Ireland there were three using malt only; and 24 using malt and unmalted grain.

49. Then continuing that classification, could you tell us what kind of unmalted grain is used in the pot still distilleries?—Barley and oats, and a little rye, and occasionally wheat. In quite a few maize is used.

50. In the patent still distilleries, what kind of unmalted grain is used?—Principally maize, but also oats and rye. Sago and tapioca were also used in the patent still distilleries.

51. What, according to the best estimate you can make, is the proportion of malt to unmalted grain that is used in the United Kingdom?—I have practically given those figures in the total estimated produce derived from the different materials.

52. You have also given me the estimated quantities produced?—Yes.

53. You might perhaps give the Commission some information as to the yeast making at distilleries, because that is an important branch of this question?—I am afraid I have not got the number of those distilleries here, but there are something like 20 distilleries where they make yeast for sale. We have no statistics as to the quantity produced, but it is very large. We are aware that some of the larger ones make from 20 to 40 tons of yeast per week. They have cut into the German trade in yeast very much during the last 20 years, and to show how important this is I may say that the price of yeast ranges from £30 to £40 per ton.

54. Then we may take it that of the total number of distilleries you have given, some exist very largely not so much for making spirits as for making yeast. Has it got to this, that the spirit is a bye-product in any case?—I do not think you can go as far as that. It forms a very important part of the business of a number of the large patent still distilleries, but they make very largely for spirit as well.

55. Would you give the Commission some explanation of the process of the manufacture of the different classes of spirits?—The processes really may be simply divided into three: mashing, fermenting, and distilling. I do not propose to go into the chemistry of distillation or brewing, but I will just say simply what the operations are. The mashing and brewing are practically the same kind of operation which goes on at a brewery, viz.: the treatment of the crushed or ground grain with hot water so as to transform the starch of the grain into sugar by the action of the malt, the diastase in the malt, some proportion of malt being required in every case. Where maize is used, that grain is generally subjected to a preliminary treatment under steam pressure before being mixed with the malt; it is a gelatinising process. When ready, the saccharine liquid obtained by the mashing of the grain is drawn off; it is cooled to the proper temperature and conveyed into the fermenting vessels. At this stage it is termed worts. Where molasses are used they are simply mixed with hot water. I believe a little acid is often used with the water.

56. For what purpose?—That is a chemical process, and I would rather not go into that. The worts having got into the fermenting vessels, yeast is added and fermentation is carried on, usually at a very rapid rate. The object of the distiller, of course, is to decompose as much as possible the saccharine matter in the worts, and fermentation, accompanied by the formation of spirit, is carried on as far as possible. Where yeast is manufactured for sale, the production of spirits is to a great extent a secondary consideration, more attention being paid to the production of yeast than to the production of spirits, and, as a rule, fermentation is not carried so far. Directly the worts get into the fermenting vessels and fermentation commences they are called wash. This wash will contain spirit proportionate in quantity to the original specific gravity of the worts before fermentation, and the extent to which fermentation shall have been carried—it is what we call the attenuation of the wash. All that remains for the distiller to do is to extract the spirit from the wash. This he does by distillation. The wash is removed to the still and subjected to heat, the temperature being raised above that of the boiling point of spirit. The spirit is vapourised, carried over in a close pipe to the worm or condensing apparatus, and there condensed. I propose to describe the still presently, but these, simply, are the processes which are carried on at a distillery.

57. During the whole process of manufacture at the distillery, is a distiller allowed to add anything in the nature of flavouring ingredients?—No. This is all we allow him to do: we allow him to add soap in the wash still; this is done to prevent the frothing of the wash. That can scarcely be understood, perhaps, without knowledge of the way in which the still works, but it is only a mechanical action. Then we allow alkali and similar materials in the low wines still, or the rectifying still; these act on the oils in the impure spirit and assist in the purification of the spirit. In the same way charcoal is allowed to be added in the low wines still, but we allow nothing in the nature of flavouring ingredients.

58. What is the extent of the control of the Excise authorities over the materials that are used by distillers?—We exercise no control whatever except with regard to molasses, and that is only because there is a Customs duty on molasses, and they come to the distiller for making into spirits duty-free, consequently we keep a slight hold on those. The molasses are quite unfit for domestic purposes.

59. How exactly would you distinguish between the flavouring materials that you can prohibit and the materials used for distilling which the Excise have no control over? What is the authority for prohibiting the addition of flavouring materials?—A distiller can only make plain spirits, and plain spirits are spirits which have had no flavouring materials added to them.

60. That is the legal definition by statute?—Yes, by statute.

61. What powers have the Excise of obtaining information as to the kinds and quantities of material that is used by distillers?—We are entirely dependent on the distiller for that. He has to make a return at the end of every distilling period.

62. Under statute?—Under statute. I have the forms here.

63. And the form of the return is specified by the statute?—Yes, the particulars required are specified.

64. Under what statute is it?—Under the Spirits Act of 1880. (*The Witness produced specimen forms and handed them in to the Commissioners.*) I might perhaps explain that the operations of the distiller are by law required to be divided into distinct brewing and distilling periods. The worts made in one brewing period must be distilled before any more worts are made. This return is with a view to our keeping a

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constant hold on the distiller with regard to each distilling and brewing period.

65. Then these powers of calling for these returns are given to the Excise for what object? Is it for Revenue purposes? What is the value to the Revenue of the information as to the materials?—As to the materials, very little. It gives us an idea of what quantity of spirit should be produced, but then we have a much better hold on the distiller with regard to that; it also binds the distiller to a statement as to what he has done during the week. We have no check whatever on the materials. The other information he gives in this form he generally gets from us—from our accounts.

66. Will you explain that?—First of all there are the materials, and then comes "Gallons of wash distilled," then "Spirits at proof made," then "Feints at proof remaining."

67. And those particulars he would get from the Excise officers?—Yes, he always checks the account of the charge against him with the officer, so the accounts are taken together.

68. I think we might now come to what is really the heart of the matter, the question of the different sorts of stills that are used in the United Kingdom, and what their character and working is?—The first is the pot still. There are here models of the various stills, and, if you take the drawings, which I have had prepared, with the models, I think they will be understood better. In the drawing you will see there is the wash still and the low wines still. It is a still just like this model as a rule. That is connected with the still charger just above, and that again is connected with two other vessels which are shown here and which are really the fermenting vessels. The worts are fermented in the fermenting vessels—those at the top. Then, when fermentation has ceased, the wash is run into the wash charger. Here, I may say, we lock up the wash, *i.e.*, we lock up the spirit producing material. From the wash charger it is run in at will by the distiller into his wash still. The models are both furnace stills. Sometimes the stills are heated by steam. Being heated, the vapour rises and goes through that coil which is called the worm, and is there condensed. The worm is shown in this glass model of a worm tub, and you can see the worm or coil through the glass. From there it runs into what we call a low wines receiver, the first product from the wash still being termed "low wines." It is a very impure spirit, unpotable in that state. The "low wines" is run into the low wines still—generally through another vessel, but that does not matter. That is No. 6 in the drawing. The "low wines" is heated in the same way as the wash, the spirit being vaporized and then condensed. There are different ways of working this low wines still. In some distilleries they take spirits, *i.e.*, potable spirits direct from the "low wines," and that is the case, I may say, in all the Highland distilleries. In Ireland, and also in some of the Scotch distilleries, they collect the first spirits from the "low wines" not as potable spirits, but what we call "feints"; they would be collected in a receiver for a second distillation—No. 8—and they would be redistilled again.

69. They would go through the same process again?—Yes, they go through the low wines still again. Then they would be collected in No. 9, which is the spirit receiver. The impure spirit which comes off from the distillation at the commencement of the distillation, and at the end of it, is called "feints," and that is run into one of the other receivers and redistilled again either with "low wines" or by itself. The stills vary a good deal in shape. In Ireland the stills have a lower head than that one in the model as a rule, and most of them have a condensing apparatus at the head—on what they call the "line arm." They extract a lot of the impurities in this condensing apparatus and run them back into the still without their going into the worm at all. That is the case also with some of the Scotch stills. That is really all, I think, I need tell you about the pot stills.

70. Then the pot still has always practically two distillations and sometimes three?—Yes.

71. Now perhaps you will come to the patent still?—The patent still is a very complicated apparatus, but it works very simply. There also you see on the left, No. 1, "Liquor for distillation"; it is marked in the drawing, and those would be the fermenting vessels where the wash is. Then No. 2 is a wash receptacle; a wash charger. No. 3 is an intermediate wash charger. I might explain the reason for that. With the Coffey apparatus once they begin they must keep on right away through with their distilling operations; they cannot stop. With the other stills opportunity is given for refilling the wash charger while the wash still is working off the last charge of wash. But where a Coffey still is used they must always have a quantity of wash which they can go on with, and as the wash charger must be emptied before fresh wash is run into it, there is an intermediate charger into which wash can be run after the Revenue account has been taken of it in the wash charger, and thus allow the latter to be refilled. We get the check for Revenue purposes in the wash charger. There is no wash charger shown here in this model. *This* is evidently intended for the wash pump, a pump which pumps the wash through the apparatus. The wash is pumped up through this pipe which enters the column at the top. These bends represent the pipe passing in and out of each compartment of the "rectifier" as this column is termed. The wash goes up here and is pumped right through that continuous pipe and it comes out below *there*, rises *here* into *this* column, the "analyser," and is *here* discharged (*describing on the model*). At the bottom of the "analyser" there is an inlet for steam. Now this "analyser" is made up of a series of compartments separated from each other by perforated metal sheets, and you will see there are some tubes dropping from each. The wash going through the pipe in the "rectifier," as we shall find out presently, becomes heated. It is very hot by the time it leaves the bottom of the "rectifier"; the pipe conveying it rises to the top of the "analyser," and the hot wash is there discharged into the upper compartment of the column; it then drops through the "analyser" from sheet to sheet, meeting the steam which is introduced at the bottom. The steam vaporises the spirit in the wash and the vapour rises, passing through the descending wash, and at last leaving the top of the "analyser" by the large pipe at the head, which pipe descends and enters the "rectifier" at the bottom of that column. The vapour entering the "rectifier" rises through the several compartments, which, as in the "analyser," are separated by perforated metal sheets, and there is subjected to the cooling power of the wash which is running through this continuous pipe; condensation and elimination of the impurities in the spirit take place as the spirit vapour makes its way through the various compartments until it gets above what is termed the spirit plate, four or five or more compartments from the top, by which time practically all impurities will have been removed. The upper compartments form an open chamber, as a rule, with additional condensing power in it, and the spirit is rapidly condensed there, and run off by means of these pipes to the refrigerator. The refrigerator is shown over *there*, and through the refrigerator the spirit is run to the spirit receiver, or if it is at the beginning or the end of the distillation, to the feints receiver. That is really the whole process of distillation by the Coffey apparatus. I do not know whether I have made it plain; but, if not, I can explain anything further.

72. Perhaps you would hand in the drawings you have had prepared of the two stills?—Yes. (*See Appendix B.*) I might mention that the Coffey apparatus is made in various sizes; they are capable of distilling continuously from 2,000 to 8,000 gallons of wash per hour, and, in the latter case, will produce continuously from 500 to 600 gallons of proof spirits per hour.

73. That is the patent still?—Yes. The pot stills vary in size from a few hundred gallons to 20,000 gallons in capacity.

74. And what is the rate of distillation?—That I cannot say. That will vary very much.

75. Please explain?—At different distilleries there will be different rates of distillation for pot stills, depending upon circumstances. Then, in addition to these stills, at many of the large distilleries, there are in addition rectifying stills which are used for further purifying the spirit.

76. Are those used in combination with the pot still or a patent still, or possibly with one or the other?—With the patent still. There are various

kinds. Some of them are a kind of combination of pot and patent still.

77. What is the object of using this additional still?—To get the spirit still more pure for rectifiers, these are the traders who make gin, and that kind of thing, who want the spirit very pure.

78. They want to get very nearly pure alcohol?—As near as they can get it.

79. With none of the bye-products?—Yes. They do not get it much stronger in rectifying it, but they get it purer.

80. Can you tell us about the character of the worts that are used for distillation in the patent still and the pot still respectively—whether there is any difference in the worts?—There is a good deal of difference in the specific gravity of the worts. For instance, for patent stills the gravity of the worts varies from 25° to 35°, as we call it, that is 1025° or 1035°, while for pot stills the specific gravity will be 1045° to 1060°. Molasses wash, I may say, is always distilled in the patent still.

81. Is the result of using wash with the heavier gravity that it produces the stronger spirit?—Oh no; it is the other way, really. It is better fitted for the still, that is the reason of it. They work with a more dilute wash in the patent still.

82. Would that have anything to do with, say, the percentage of sugar in the wash, or something like that?—Oh, yes, that is it, of course. I may say that the percentage of proof spirit in the wash after fermentation would give you an idea. In the patent still wash there would only be from 5 to 8 per cent. of proof spirit, but in the pot still there would be from 8 to 12. As showing the effect of yeast manufacture, I may say the proportion of spirit in the wash is considerably less where yeast is made.

83. At what stage of the manufacture do the Excise officers begin to control the operations of the distillery?—We do not take any account of anything until the worts are collected in the wash or fermenting back, and there, directly they are collected, the distiller is by statute required to declare the quantity and the gravity of the wort collected, and the officer checks his account. Once having taken account of the worts the officer continues to take an account from time to time of the wash during fermentation.

84. Starting first with the pot still distillery, would you give us some description of the utensils that are employed and the method of working it?—On that drawing you will see the fermenting vessels; that is No. 1 on the left-hand corner. That is where the worts are run, and that is where the officer first takes any account. We keep a strict account of the wash which is fermented there, because we raise a presumptive charge on what is called the attenuation of the wash.

85. That is a preliminary way of ascertaining the amount of duty that ought subsequently to be got out of the materials?—Yes. Then comes the wash charger, that is the vessel next to that—No. 2 in the drawing. There we take a very close account, and we lock up the wash which goes in there, so that, having got that preliminary account, we know exactly what quantity of spirits the distiller should produce from that particular quantity of wash. We get our presumptive account by first taking the original gravity and then the lowest gravity after fermentation. The difference between these we call attenuation. The attenuation charge, I may say, dates back to 1823, 4th George IV., cap. 94, which Act authorises a charge of one gallon of proof spirit for every five degrees of attenuation in 100 gallons of wash. As an illustration, if the wash were of an original gravity of 50° (1050°), and when fermentation was finished, that wash was of a gravity of 1,000, there would be an attenuation of 50°. In that wash we are entitled to assume, for the purposes of the presumptive charge, that there would be 10 per cent. of spirit at proof strength. From the wash charger the wash goes into the wash still. That still is under Revenue lock. As shown here, as I have mentioned before, the spirits from the wash still go into the low wines receiver or low wines receiver and charger. That also is under Revenue lock. From there it goes to the low wines still—also under Revenue lock—and from there, after being distilled, it goes to the feints receiver and the spirits receiver. The feints receiver receives the impure spirit, and the spirit receiver the pure spirit, everything being under Revenue lock.

86. So that really the Revenue know exactly what is happening, and have complete control all the way through during that process?—Yes.

87. When the spirit has gone through this process of manufacture and has got as far as the spirit receiver, what is the strength of the spirit at that stage?—The strengths vary very much. In the majority of Scotch pot still distilleries the spirits are taken from the distillation of the low wines or spirits of the first extraction. That spirit generally runs from 13 to 18 over proof. Where there is a second distillation it would be run up to a strength of from 40 to 50 over proof. In Ireland, as I mentioned before, the rule is to re-distil the spirits produced by the distillation of the low wines and, consequently, there they run spirits as a rule from 40 to 50 over proof.

88. That would be for the pot still?—Yes.

89. When the spirit is bonded what is the ordinary strength of the spirit as compared with the strength at which it is taken into the receivers?—The usual strength in Scotland is 11 over proof; in Ireland it is about 25 over proof. Some bond at 11 over proof in Ireland, but the great bulk of it is 25 over proof. By law, however, the distiller may bond at any strength not below 20 under proof, or above 25 over proof, and also above 43 over proof. Forty-three over proof, I may say in passing, is the minimum strength, following the legal definition, of spirits of wine. In some distilleries they bond at a number of different strengths to suit customers, but those are the ordinary strengths which I have given you.

90. Would you come now to the patent still distilleries, and give us the corresponding information to that which you have given us with regard to the pot still distilleries, beginning with the utensils and the methods of working them?—I am afraid I shall be going over some of the ground I have already gone over in describing the stills. At a patent still distillery they have often a very large number of fermenting vessels and several wash chargers, and several intermediate wash chargers, and, it may be, two patent stills, several spirit receivers and feints receivers, and there is another receiver which they do not have with the other still, that is the hot feints receiver. That is shown below in the model. It is the impure spirits which are collected at the bottom of the "rectifier," and those are pumped continuously all through the distillation up to mix with the wash. They are redistilling the impure spirits the whole time they are distilling with the patent still. The last part of the impure spirit which drops to the bottom of the "rectifier" is allowed to remain in the hot feints receiver. From the hot feints receiver at the end of the distilling period, it is usual to run off the fusel oil which is collected there. Fusel oil, I may say, is rather a valuable bye-product, worth a good deal more than spirit.

91. What is its use? Has it some chemical use?—I think it is principally used for solvent purposes.

92. (*Dr. Horace Brown.*) Photographic films?—Yes; it is also used for some special kinds of varnishes.

93. (*Mr. Guillemard.*) That was referred to as far back as 1890 in the House of Commons Select Committee. Do you know whether the use of fusel oil has increased since then?—I think it has increased as a solvent. I do not think the price was anything like what it is now. They get as much as 5*s.* a gallon for it.

94. Would you come to the strength of the spirits in the patent still at the point where it is collected in the spirit receiver?—With a patent still they run spirits continuously throughout their distillation at a strength from 65 to 68, or even 69 over proof.

95. Very much higher than the pot still?—Yes, they cannot get that strength from a pot still. In England large quantities of this spirit go direct to the rectifiers after duty has been paid upon it. A great quantity also goes direct for methylation.

96. When you come to bonding the spirit, that is the product of the patent still as compared with the product of the pot still, at what strength would it be bonded as an ordinary rule?—The strengths vary very much at patent still distilleries. In Scotland some are sent out at the highest strength, but most

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of it is bonded at 11 over proof or thereabouts—the same strength as the pot still. It is bonded at lower strengths also to suit customers, but that is the rule. In Ireland most of it is bonded at 25 over proof, some at 11, and a fair quantity at varying strengths from 20 under proof upwards, and some even at the highest strength.

97. How is it reduced from the strength at which it stands in the receiver to the bonding strength? Is that mainly by dilution with water or blending or what?—Only by the addition of water. That is done in the next process.

98. Now we have got the spirit as far as the time when it is collected in the spirit receiver. From that stage onwards what control have the Revenue authorities over the spirit?—They have a perfectly close control over it from there. It can only be removed from the spirit receiver through a close metal pipe with cocks upon it, which are under our locks, to the spirit store.

99. The spirit store being a part of the distillery?—Yes. The spirit store is a kind of intermediate bond into which the spirit from each distilling period separately is run. It is run into vats there from the spirit receiver.

100. Closed vats?—Yes, they are all closed vats, but we only lock up the discharge cocks of these vats. The spirits of one distilling period must be cleared from the store before those of the next succeeding period are taken in. That is to enable an exact Revenue account to be taken of the period's production.

101. They would only stay in the spirit store quite a short time, I take it?—Yes, that is all. They cannot stay there more than a few days. The store must be cleared within 10 days of the end of the distilling period.

102. When they have passed through the spirits store what happens to the spirit then?—In the spirit store the spirits are all racked into casks.

103. Racking simply means putting into casks?—Simply turning the spirits from the vats into the casks. All casks at a distillery must be marked in a certain way, marked with the name of the distillery, the name of the distiller and the number of gallons the cask can contain. If the spirit is to be removed to a bonded warehouse, or, as we term it, "warehoused," the casks must also be marked with the year in which the spirits are made and the progressive number of the cask commencing with No. 1 for each year, so that we can identify every cask that is filled in a store and removed to a warehouse.

104. What different kinds of bonded warehouses are there at a distillery to which the spirit can be removed from the spirit store?—I might say here that as no spirits are allowed on a distiller's premises except those which have been made at the distillery, it will be understood that the distiller is only dealing with spirits which have been manufactured at his distillery. Spirits once having left the distillery cannot be brought back.

105. Not under any conditions?—Not under any conditions. The warehouses at a distillery may be these: the vat warehouse, into which the spirits may be conveyed from the store by close metal pipe, and warehoused in vats; the ordinary distiller's warehouse where the spirits are stored in cask; and the distiller's bonded warehouse, that is, a warehouse for which he gives bond specially in order that he may be allowed to transfer spirits therein to customers, whose names shall stand in the official books as the owners of the spirits.

106. That is practically storing for other people what he has sold already?—Yes. Of course, they do that in their ordinary warehouse, too, but we take no account of any change of ownership.

107. Does that cover all you have to say about the control of spirits as long as they stay in the distillery?—No; we shall, I think, come to that later.

108. Can you tell us what operations may be performed by a distiller at a distillery in preparing the spirit for his customers?—In a spirit store a distiller may prepare his spirits by reducing them with water to the required strength within the legal limits which I have already mentioned. He may add fluid colouring matter in quantity not exceeding 1 pint to every 80 gallons of spirits if they are intended for home consumption, the condition being that the hydrometer indication is not appreciably affected, and that the addition does not change the denomination of the spirits. If a larger quantity of colouring matter were allowed the strength of the spirits would be, as we call it, obscured; we should not get a proper reading of the hydrometer and we should lose duty by it. But if the spirits are intended for exportation we do not limit the distiller with regard to the quantity of colouring matter because we are not concerned with regard to the strength.

109. There being no duty to collect, you do not care?—We do not mind about it. From store he may send spirits into consumption on payment of the duty, or, without paying duty, he may warehouse it in his vat warehouse, or in casks in his distillery, or distillery bonded warehouse. He may send it to Customs or Excise warehouse away from his premises, or to the Customs for exportation, or for shipment as stores. He may send it away duty free also for methylation, or for use in arts or manufactures where the persons are authorised under the Finance Act of 1902 to receive it.

110. To receive it free of duty?—To receive it free of duty. When sent away duty free he has to give bond for the due production of the spirit at its place of destination.

111. Are there any particular regulations as to marking the casks of spirits when they have been filled in the distillery?—Yes, I have given those, I think.

112. You have nothing more to say on that beyond the information you have given?—No.

113. Is a distiller allowed to bottle spirit in his distillery?—Oh, yes, if he provides an approved store for the purpose.

114. Would that be bottling for sale or for bonding?—Either. I may add that in a vat warehouse, except that he may not reduce the strength of spirits unless for exportation, he can do what he can do in the spirit store.

115. Is the distiller allowed to have duty-paid spirits in his distillery?—Oh, yes, if he provides a secure racking store where nothing but duty-paid spirits are kept. They are kept under Revenue control.

116. Quite distinct, of course, from that part of the building which contains spirits on which duty has not been paid?—Yes. It may be side by side—we do not mind that, because it is entirely under our control.

117. From that store is he allowed to sell under a license to the public?—No, not from that store.

118. Not from the duty-paid store?—No. He would sell under his distiller's license from that—that is, in quantities of not less than 9 gallons. He is not allowed to have a spirit dealer's license on the distillery premises and not within two miles of the distillery unless by special permission of the Commissioners.

119. Then what operations can a distiller conduct? What can he do in the duty-paid stores?—He can rack spirits into casks of suitable size, and we also allow him to reduce spirits to strengths to suit his customers.

120. Within the legal limits?—Yes, as to quantity.

121. Passing from that to the distillery warehouse, what can a distiller do there?—He is allowed to rack spirits from one cask to another, or he may vat or blend spirits—putting them together in a vat, that is—and he may colour spirits in the same manner and with the same limitation as to quantity as he can in store, and he may reduce with water spirits intended for exportation but not for home consumption.

122. What regulations are there in force with regard to marking casks of spirits after they have been racked?—If the casks are filled with vatted or blended spirits of different years they must be marked with the latest year in which any of the spirits contained in the blend were warehoused.

123. Quite independent of amount?—Oh, yes. Every cask which goes from a distiller's warehouse has the year of production of the spirits marked on

it, so if they put together spirits of different years we say, "You must mark those spirits with the latest year."

124. The mark in that case would be a mark made on the cask?—On the cask.

125. As long as the spirit stayed in the cask it would be indelible, but if later on it was moved into another cask or blended after it had left Revenue control, the mark would cease to be of any use to the purchaser?—Oh, quite. If the spirits are racked more than once every cask has to be marked with the letter "R" to show that they have been racked.

126. And can that be done as often as they like?—Yes.

127. As an ordinary rule, is this blending of spirits done several times?—There is not very much of it done at distilleries.

128. It is mainly done outside?—Yes, it is done outside. We shall come to that presently.

129. Could you tell us now something as to the ultimate destination of the spirit that is made in the pot and patent still distilleries respectively?—In a general way I can. Of pot still distillery spirits some quite small proportion goes direct into consumption as made. Most of it is bonded for some years, and then the greater part is blended before going into consumption. A considerable quantity is exported in casks direct from the distilleries. There is a very large export trade in bottled blended spirits.

130. By blended spirits you mean different sorts?—The spirits from different distilleries put together.

131. The blend might be a mixture of pot and patent, or it might be pot mixed with pot, or patent mixed with patent, I suppose?—Oh, yes.

132. And the object of blending, as a rule, is, is it not, to obtain a particular strength for a particular customer, or to obtain particular flavours to a certain customer's desire?—That is what the blenders would tell you.

133. What other explanation could you offer of it?—It makes all the difference as to the cost of the blend what spirit you put into it. Of course, there is a very great deal in blending spirits to get a particular flavour.

134. Those two reasons would operate to get a particular flavour and possibly to reduce the cost?—Yes. Of course, the blend is of different monetary values. Then, with regard to the patent still spirit, a very considerable portion of that made from molasses is methylated, or is used for industrial purposes.

135. Would you describe to the Commission what the process of methylating is?—Methylated spirit is the kind of spirit that we call now industrial spirit, which is allowed to be used duty free.

136. Non-potable? — Non-potable. There are two kinds of methylated spirits, industrial methylated spirit, which contains 5 per cent. of impure methyl-alcohol or wood naphtha mixed with it, and mineralised methylated spirit, which contains 10 per cent. of methyl-alcohol or wood naphtha, and a very small quantity—$\frac{3}{4}$ths of 1 per cent.—of mineral naphtha, as well. The industrial methylated spirit is only allowed to be used by people who are specially authorised by our Commissioners, and who give bond for the use of it. The mineralised can be used by anybody, and is sold retail by licensed retailers of methylated spirit. A very large quantity of molasses spirit goes for methylation purposes. Some molasses spirit is exported, and probably some—not very much, I think, is used for blending. The spirit made from malt and grain in Ireland is chiefly used for blending with Irish pot still spirit, but some goes to Scotland and England; the spirit made in England from malt and grain is very largely used by rectifiers for making into gin and other compounds. Some is doubtless used for blending purposes, and some would be methylated.

137. Can you tell the Commission something about the regulations that govern the removal of spirit from distilleries?—An exact account of the quantity and strength of the spirit is taken by the officer before the spirit leaves the store or warehouse. No spirit can be removed from a distillery unless accompanied by a permit written by the Excise officer.

Adjourned for a short time.

138. (*Mr. Guillemard.*) You were telling the Commission something about the regulations that govern the removal of spirit from distilleries?—Yes. As I had said, an exact account of the quantity and strength of the spirit is taken by the Revenue officer before the spirit leaves the store or warehouse. No spirit can be removed from a distillery unless accompanied by a permit written by the Excise officer. I have given the members of the Commission specimen permits. There are different permits for the store and warehouse. If the spirits are for home consumption—that is, if they go directly out of the control of the Revenue officers—the duty has to be paid first, but the same permit is used. If the spirits are for exportation, the distiller gives bond for their due exportation, and, similarly, if they are removed to another bonded warehouse he gives bond, and the Customs or the Excise officer, if it is an Excise warehouse, receives from the distillery a despatch giving the full particulars of the casks, and when the spirits are received and properly accounted for a certificate of receipt is sent back. *This* is the form. (*Copies of the same were handed to the Commissioners.*) "Wet goods" refers to spirits and wines.

139. Then these permits enable the destination of any particular quantity of spirit to be traced? The Excise keep a knowledge of where it has gone to?—Yes.

140. That is the object of the permits, is it not?—Yes; that is partly the object. Unless the spirits are accompanied by a permit they are seizable *en route*. If the spirits are removed for methylation, in the same way a despatch is sent to the officer who attends to witness the methylation, a bond being given for the removal of the spirits, and the bond is only cancelled on the issue of a certificate that the spirits have been duly methylated.

141. Does that complete what you have to say on that?—That, I think, really covers the ground of the question.

142. Then you have now traced the spirit up to the time when it leaves the distillery. Now if spirit is not bonded in a distillery what can happen to it? What other bonded warehouses are there other than the bonded warehouses at distilleries in which British spirits may be deposited?—There are what are called general warehouses, either under the control of the Excise or the Customs; what we know as wet goods warehouses for spirits and wines.

143. Duty free warehouses?—Yes. I have here the number of warehouses under our control.

144. Have you the number under the Customs also?—No, I have not the Customs.

145. You can tell us the number under Excise control?—Yes. According to the last returns made to us—we only get these occasionally—there were 1,077 distillers' warehouses. At some distilleries there are a large number of warehouses, the distillers are not confined to any particular number, and they keep on adding to them as they want them. There were 533 general warehouses.

146. Under the Excise?—Under the Excise, and 105 bottling warehouses.

147. Perhaps you would tell us what operations go on in these bonded warehouses other than distillery warehouses?—Such operations as racking, vatting or blending, bottling, colouring, reducing for bottling or exportation, and methylating. Those are practically all the operations which are generally carried on. It is very rare that any methylation is done in a warehouse, but it can be done under the provisions of the law.

148. Perhaps you would tell us a little more in detail about the operations?—I might give you figures showing the immense amount of work there is in connection with the operations—the number of gallons which are operated upon, *i.e.*, which will be either racked, vatted, or bottled. In the last financial year there were in Excise warehouses 27,453,881 proof gallons of British spirits operated upon. I have the Customs figures here as well showing the total quantity. In Customs warehouses 16,013,617 proof gallons—that is British spirits also. The total is 43,467,498 proof gallons.

149. Could you explain the processes a little more in detail? What, for instance, is racking?—Racking

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is simply the drawing off from one cask into another. I might say that all operations in a warehouse are under the immediate control of an officer who takes account of the spirits both before and after the operation.

150. Then, I suppose, we come to vatting or blending?—They are practically the same operation—placing the contents of a number of different casks together in a vat to obtain uniformity of character in the spirits.

151. Is there any limit to what spirits may or may not be blended? For instance, may you take British spirit and mix it in bond with a foreign spirit?—Not if the spirit is intended for home consumption, but it can be done for exportation, that is to say, British plain spirits may be mixed with unsweetened foreign spirits, in which case the casks have to be marked "Mixed," and other marks and brands have to be erased from the cask.

152. What actually is the mark that is put upon it?—The word "Mixed."

153. (*Chairman.*) Only one word?—That is all. Of course the numbers are also marked on the casks.

154. (*Mr. Guillemard.*) Then what regulations are there with regard to marking the casks of spirits that have been racked, blended, or vatted?—If the spirits are from the same distillery the letter "R," which would mean "racked." has to be placed on the cask after the warehouse number. If from different distilleries the words "Vatted" or "Blended" must be marked on the casks.

155. The blending question is one of the most important questions that we have before us. Could you give us any idea of the kind of mixtures of British spirits which go to form the blends? Of course one does not expect to get information that would be absolutely accurate, but could you give us some general idea?—Yes, I can give you a general idea. Of course, this is rather a burning question. I will just give some percentages.

156. It is really an important question, and you might give us all you know on the subject?—There are two classes of blends—blends of pot still spirit made at different distilleries, and blends of pot still with patent still spirit. The latter class of blend largely preponderates and is alone of interest. Where pot still spirits are blended it very frequently happens that spirits will be produced of quite a large number of distilleries, the blender having his own idea as to what is necessary to give him the proper flavour.

157. The blender may be blending spirits possibly from a lot of different distillers who have no connection with the blender? Is that so?—Yes.

158. The blending in bonded warehouses is practically a separate trade?—Quite separate from the distilling trade—that is, it is carried on in a general warehouse, of course. I can give these actual figures. These are blends of pot still with patent still spirit. Here is one, 14 per cent. of pot still distillery spirit and 86 per cent. of patent still. Here is another of 55 and 45 per cent. They vary very much, you see. Then 24 and 76 per cent.

159. (*Chairman.*) Which way?—I am giving the pot still first. Then 32 and 68 per cent; 13 and 87 per cent.; 56 and 44 per cent.; 80 and 20 per cent.—that is 80 per cent. pot there. Here is one of 6 per cent. pot and 13 per cent. patent, and then there is 81 per cent. of a re-blended spirit of which the constituents were not known. Here is one with a very small quantity of pot still—4 per cent.—and 96 of patent still. Here is another one of 6 per cent. and 94 per cent. of patent still. I have a number here varying from 25 to 55. Here is one of 68 per cent. of pot. Then I have a number here where the pot still spirit largely preponderates, for instance, 80 to 20; 84 to 16; 85 to 15; 80 to 20; and 84 to 16. I may say these are taken from different parts of the country.

160. (*Mr. Guillemard.*) And many of them would be—I will not ask for names—well-known blends that are known in the market. Would that be so?—I really do not know. I have got this information without getting the names.

161. When these blends have been made and put in the blended form in the cask, is there any mark put on the cask to show that it is a blend, or that it is a blend in such and such a proportion?—Yes. It is marked "Blended," but not the proportions.

162. The Excise have no power under the law, I think, to ask for the proportions or to insist that they should be marked?—No.

163. All that you get is simply the fact that it is a blend. You cannot tell whether it is one of 80 pot to 20 patent, or 20 pot to 80 patent?—No.

164. Have you the selling prices by any chance, or any approximation to them, of the blends that you have quoted?—No. I think that is all I can say about the blends. I have a number of others, but they are all about the same figures.

165. Now as to the question of practical administration. Is it possible for a Revenue officer to know of what a blend actually consists?—No, not under the present regulations. Of course, he does in a great many cases, and he has done in the majority of these cases which I have quoted. A blender may blend at two different warehouses, sending the two blends to a third warehouse, and there blend those two or blend those two with other spirits.

166. When they arrive from the third warehouse the history of them would not be known?—No. The identity of the spirits would be completely lost. The proprietor may blend as often as he likes.

167. Beyond that blending which we have been talking of, what else may be done with British spirits in a bonded warehouse that is not a distillery warehouse?—If the proprietor be a distiller or rectifier he can, under the special authority of the Spirits Act, which authority applies simply to these two classes of traders, add any sweetening or colouring matter, or any other ingredient to the spirits, but only for exportation or ships' stores. I may say that this is very rarely taken advantage of. It may sometimes be of service to makers of compounds, but a distiller does not want to compound, and under the ordinary regulations he is allowed to colour, which is practically all he wants to do. Then British spirits may be used in warehouses for fortifying wines or fortifying lime-juice, or under special conditions they may be used in the making of perfumed spirits for exportation only. I think that really covers the whole ground.

168. Then, speaking generally, what is the nature of the control exercised by the Excise over these operations of traders on spirits in warehouses?—The warehouse proprietor, to begin with, cannot touch the spirits to interfere with them in any way without bringing to the officer what we call a warrant, setting forth what he wishes to do. Having got that warrant the officer compares the account of the spirits which are there entered with the official account, and then proceeds to take account of the spirits before the operation. The operation is performed, and at the completion of the operation the account is again taken, and there are certain fixed allowances for waste during the operation. If the waste exceeds these allowances duty has to be paid on the deficiency.

169. That would be a small percentage?—Yes, a small percentage.

170. How much?—Two per cent. for bottling and 1 per cent. for racking or vatting.

171. Would what you have been saying be true of operations in Customs warehouses as well as in Excise warehouses?—Yes, we have a joint code of warehouse regulations which governs the receipt and delivery of and all operations allowed on dutiable goods deposited in either Customs or Excise general warehouses.

172. That code, I think, is drawn up by the two Revenue Boards under Statute, is it not?—Not under Statute; it is under Treasury regulation.

173. Is there nothing in the Statute which authorises them to draw up regulations for this purpose?—Yes, the Spirit Act gives the Commissioners of Inland Revenue power and the Customs Consolidation Act similarly gives the Commissioners of Customs power

174. The actual regulations are made by the two Boards?—Yes.

175. And they have power to vary?—Yes.

176. Now to come to compounded spirits, what do they really consist of?—Really a great variety of flavoured spirits: for instance, gin, British brandy, and a great number of liqueurs and cordials; for example, cherry whiskey, cherry brandy, ginger brandy, sloe gin, peppermint, ginger, lemon and other

fruit cordials, and orange bitters. These are made by the rectifier or compounder, duty-paid spirits being used.

177. Are all compounds made with duty-paid spirit?—Yes.

178. What is the kind of business carried on by a rectifier in this connection?—We discriminate between a rectifier having a still and a rectifier not having a still. The latter we call a compounder. There is a great deal of difference in the kind of control we exercise over the two. An important part of the business of a rectifier using a still is the manufacture of gin, either from spirits which he has himself rectified or from rectified spirits received from patent still distilleries, or direct from grain spirit if of sufficient purity. He also makes rectified spirits of wine for sale to chemists and others and the making of compounds generally is also carried on by him. I may say that considerable quantities of compounded spirits are warehoused by the rectifier on drawback. He makes the spirits and he has not a sale for them immediately. Of course, he does not want to lie out of the duty, and the law provides for these spirits, subject to a certain limitation as to strength, being warehoused, and the drawback being paid to him. Then the duty is paid on the spirits, when they go into consumption. He also warehouses on drawback a great deal for exportation, and he can warehouse spirits of wine for exportation, but not for home consumption or spirits of wine for use duty free under the authority of the Finance Act, 1902.

179. It is for what they call use in the arts?—Yes, use in the arts and manufactures.

180. You have been speaking about the rectifier with a still?—Yes.

181. What about the other man, the rectifier who has not a still, whom, I think, you call the compounder?—He makes a number of different compounds. There are a number of compounders now who do a very large and important business in the manufacture of tinctures, medicinal spirits, and flavouring essences particularly for exportation on drawback. A number of manufacturing chemists are licensed as compounders for this purpose.

182. What kind of spirits are required by rectifiers?—All the British spirit comes from the patent still distilleries. They like to get it as pure as possible. Much of it they receive at a high strength, from 65 to 69 over proof, and, as a rule, it comes to them direct from the spirit store, or from the vat warehouse without being bonded in cask.

183. It comes to them as soon as it is made?—Yes, as soon as it is made. I have some interesting figures that might come in here as to the duty paid on spirits. This is all quite new spirits coming from store. Of course, you understand the spirits cannot be more than a week old when they come from store. Last year the quantity of spirits from store on which duty was paid in England was 1,286,912 proof gallons; Scotland, 205,570; Ireland, 56,416; total, 1,548,898. The great bulk of that would go to rectifiers.

184. I shall probably have to ask the Customs representative about the foreign spirit that goes to them. You would not know about that?—No. They will not be able to tell you that either, because they do not deal with them as rectifiers.

185. What sort of Excise control is there over a rectifier?—Where a still is used the control is very close. The still cannot be used without the intervention of the Revenue officer, who attends on notice and examines the contents of the still. It is left open so that they can put anything into it, but they cannot work it.

186. It is locked with a Revenue lock?—Yes, with a Revenue lock; the officer puts the Revenue lock on it, so that nothing else can be placed in the still, and he unlocks the steam valve or furnace door to allow the still to be worked. The officer visits the premises from time to time while the still is being worked, and when distillation is finished he secures the steam valve or furnace door under a Revenue lock. This is to prevent the possibility of illicit distillation of spirit from wash, wine or other materials. Then we keep an account of the rectifier's stock; the stock is taken from time to time by our officers, and penalties are incurred by the rectifiers for irregularities. I might add that when the rectifier warehouses spirits on drawback the officer attends and takes an exact account of the spirits before they are removed to warehouse.

187. You mentioned methylated spirit a little time back. What kind of spirit is mainly used in making methylated spirit?—Always patent still spirit, and principally molasses spirit.

188. Is that because it is cheaper?—Yes.

189. The difference in price is very considerable, is it not?—Between patent still and pot still?

190. Yes?—Yes.

191. Have you any figures bearing on that?—I have here figures out of "The Wine Trades' Review" of last month. It is termed here "Grain whiskey, Scotland"—that is, patent still spirit—but the trade term here is "Grain whiskey." It is 1s. 6d. and 1s. 7d. per proof gallon.

192. (*Dr. Horace Brown.*) That is new spirit?—Yes, that is new spirit. For Ireland it is practically the same—1s. 9d. and 1s. 10d. per bulk gallon at 25 over proof—practically the same price. Here are the current prices of Irish whiskies in bond. These are pot still, and they are new whiskey. They vary from 3s. 1d. to 5s. per gallon 25 over proof.

193. (*Mr. Guillemard.*) Have you any figure for Scotch pot still whiskey?—I have some figures here, but I am not sure whether this is new or not. The Scotch varies from 3s. 3d. to 4s. 2d.—it may be a little more. That is for 11 over proof spirit. By the way, there are lower prices than that. That is for Highland whiskey. Campbeltown is from 2s. 6d. to 2s. 11d.

194. Is that a pure pot still?—Yes; and Lowland malt from 2s. 6d. to 3s. 6d.

195. What is the reason for the Irish being higher than the Scotch?—I am afraid I am not in a position to say.

196. It is not a question of strength?—That is partly the reason, because the Irish is 25 over proof, and the other is 11 over proof. I expect that about brings it to the same thing as a rule. Of course, some whiskies would fetch a higher price than others.

197. You were on the methylated spirit and the kind of spirit used in making it. Have you anything more to say on that?—I think not.

198. Then perhaps you could give us some figures of the quantity respectively of British and foreign spirit that is used for methylation?—Last year there were 6,550,285 proof gallons of British spirits methylated. We did not have any foreign spirit at all methylated last year—in fact, there has been none since 1904-5, and then only a very small quantity.

199. What stopped it?—It is the difference in price. The foreigners could not send it in at a low enough price.

200. Have you any figures; if so, you had better put them in later, showing the quantity of foreign and British spirits respectively used for methylation for some years back?—Yes, I have, and I will put them in later. (*See Appendix A, II.* (9).)

201. They will be rather interesting. Apart from methylated spirit what other spirit is there used in what they call the arts and manufactures?—By the Finance Act of 1902, Section 8, power was given to the Commissioners——

202. The Commissioners of Inland Revenue?—Yes, power was given to the Commissioners of Inland Revenue to allow spirits to be delivered pure for use in the arts and manufactures under whatever conditions they thought fit to impose.

203. Have you any idea of the amount of spirit which has been so used since the Act has been passed?—Yes. I can give you the quantities for last year. The quantities for last year were 431,898 proof gallons. The total quantity since 1902 had better be put in afterwards. We do not allow this spirit to be used perfectly pure as a rule, nearly the whole of it is denatured in some way before being given out for use. Then in addition to that, 4,017 proof gallons were allowed under the same authority to be received for scientific purposes by universities, hospitals, and public institutions. That,

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of course, is allowed to be used pure. I might add that 3,505 gallons of this total were foreign spirits; most of this would be imported absolute alcohol, and the rest would be pure methylic alcohol which is chargeable with the Customs duty on foreign spirits. (*See Appendix A, II.* (10).)

204. Could you give the Commission any idea of the quantity of British spirits that there now is in bonded warehouses in England, Scotland and Ireland?—Yes. At the close of the last financial year there were first of all in England 10,897,109 proof gallons; in Scotland 118,977,707 proof gallons; in Ireland 31,773,593 proof gallons; total 161,648,409 proof gallons.

205. How many years' consumption would that mean roughly?—About five years' consumption.

206. Do you know if the amount in bond is increasing or decreasing?—It has been decreasing for the last four years. I think there were nearly 5½ millions less last year than there were in 1903-4.

207. Is that due to less being put into bond, or to more being taken out do you think?—It is due to less being put into bond. The make has been very much smaller.

208. Then it has been kept less time in bond?—No, that does not follow.

209. The consumption of whiskey and other drinks has been decreasing actually, has it not?—Yes, slightly. In British spirits it has been going down ever since 1900.

210. Pretty steadily?—Yes.

211. Could you give the figures since 1900?—Yes. ·95 of a gallon in 1900. Then it goes down to ·89 and ·81. Then there is a rise to ·83 and a fall to ·80, ·77, ·75 and ·74. I might say, though, that the total British and foreign together, which also have been going down, in the last two years have been exactly alike, ·91. That is due to a larger quantity of foreign spirits being consumed in the year 1906-7.

212. *Apropos* of the last thing you spoke of, can you give us any idea of the relation which the stock in warehouse in the United Kingdom bears to the annual consumption?—Last year the stock was equivalent to about five years' consumption.

213. Can you carry that any further?—No, I do not think so.

214. While the spirits are in warehouse I suppose there is a great deal of loss from natural causes—evaporation, for instance. Could you give us any information on that?—Loss in warehouse varies very considerably according to the nature of the warehouse. The fixed regulation allowance is 5 per cent., 1 per cent. less for large casks, that is, casks of 80 gallons and upwards, for the first year, and 2 per cent. additional for each additional year. That allowance is more than sufficient under ordinary conditions. I should say that the actual loss in proof quantity is, on the average, 1½ per cent. less than the regulation allowance, that is if the warehouses are in ordinary condition as to surroundings, and the casks are in good condition, but in very damp or in very dry warehouses the loss will exceed the regulation ordinary allowance, sometimes very considerably.

215. Could you give us any idea of the average time for which spirits are stored in bond?—No, I do not think that would be possible. The greater part of the pot still spirit is kept in warehouse for from two to ten years and longer before it reaches the consumer, but it is really impossible to average it.

216. I think the next point is the amount of Revenue control that is exercised over the wholesale and retail dealers in spirits. Perhaps you could tell the Commission, with regard to the sale of spirits to the public by a licensed dealer or a retailer, what regulations there are governing the receipt, the storage, and the sending out of spirits by a licensed person?—Yes. I might hand these certificates to you. (*Certificates handed to the Commissioners.*) Neither a dealer in spirits nor a retailer in spirits may receive any spirits unless they are accompanied by a permit or a certificate. The permits are those which I gave you before, the store permit and the warehouse permit—that is from a distillery—and *this* blue form is the permit from a general warehouse. (*The form was handed to the Commissioners.*) The difference between those permits is this, that at a distillery the officer fills in all the particulars in the permit. From a general warehouse the proprietor of the spirits fills in the particulars on *this*, and requests a permit; the officer fills in the particulars at the bottom and signs his name, and that goes as the authority for the removal of the spirits from a general warehouse. These traders receive their spirits either from a distillery or a general warehouse, or from a rectifier, or from a dealer in spirits. The dealer and retailer are required to what is technically called "make entry" of their premises—that is to say, they have to give a written description of their premises in which they carry on any part of their business, and they are only allowed to store spirits in such entered premises. That gives the Revenue officer a power of entry to all these places, and also gives him information as to where he will find the goods stored. The spirit dealer or retailer has to keep a stock book. This is a statutory requirement, and in this he has to enter particulars of all spirits received and of all spirits sent out, if they are sent out under certificate. That I will explain. The permits or certificates which he receives with the spirits he has to keep and deliver up to the Excise officer. In sending out spirits the dealer must write a certificate in that form that I have just given you. That is written by the trader himself, and he must fill up one of these for all the spirits which he sends out, unless he has a licence to sell in bottle, in which case he can sell less than one gallon. What it really means is that no spirits can be removed by any trader from any place to another if the quantity exceeds one gallon unless they are accompanied by a certificate of this kind.

217. With regard to the stocks, do the Excise exercise any control over the stocks? Do they have any stocktaking, or close inspection of the stocks?—No; not unless there are any very special circumstances rendering it necessary or advisable. We have power to take stocks, but we do not do it

218. Statutory power?—Yes, statutory power.

219. With regard to the preparation or sale of spirits by the traders, what power of interference have the Excise got there?—Very little. We really do not interfere at all, except to see that no business is carried on which would render a compounder's licence necessary, and we endeavour to prevent the receipt of illicit spirits.

220. All that is done by the Excise there is simply done for the Revenue only?—That is so.

221. The last question I will put to you is about the export trade in British spirit. Is that a large trade?—It is a very important trade now. The quantity exported last year was 7,341,077 proof gallons. The business seems to be on the increase.

222. Do you know what sort of spirit that was, principally?—A great deal of it is good blends of spirit.

223. Whiskey?—Yes, *i.e.*, either of pot still spirit only or of pot still and patent still spirit.

224. (*Dr. Horace Brown.*) I should like to ask you one or two questions as to the distinctive character between patent still and pot still spirit. Do you regard the two as being essentially different in character?—Well; if I had the two put down together, side by side, there would be no doubt about distinguishing the two, and I should have no difficulty in saying which was which.

225. Is the patent still product a silent spirit, in the strict sense of the word?—Yes; I think so. Of course, I am not an expert on spirits.

226. Perhaps I am not right in asking you these questions. You make no distinction as regards the Excise?—None whatever; it is all spirit.

227. You put it all down as plain spirit?—Yes.

228. (*Dr. Adeney.*) I should like to ask you this: Is there any material difference in construction amongst pot stills?—No.

229. That is to say, the Irish and the Scotch pot stills are essentially similar in character, so far as construction is concerned?—Yes.

230. You gave us the average length of time of bond for the pot still spirit, and I think you said from 2 to 10 years?—Yes.

231. Could you give us any information as to the bonding of patent still spirit?—No; it is not so much as that.

232. Could you give us any figure?—No; I cannot give you any figure. I know that some patent still is bonded for a considerable time.

233. You do know that?—Yes.

234. But the greater part for a comparatively shorter time?—Yes, the greater part would be for a much shorter time than the pot still spirit.

235. (*Dr. G. S. Buchanan.*) I understand there is no official definition of "whiskey" in any sense for Excise purposes?—No, we do not know of such a thing.

236. And it is not differentiated as "whiskey" in any official return?—No.

237. You told us about the duty on spirits. I gather that that is subject to certain allowances as regards evaporation, and one thing and another. The allowance includes an allowance in respect of loss of spirit due to ageing, does it not?—Of course, that is really what it is in effect, but we always charge upon the proof quantity which we find. If the proof quantity which we find in the whiskey is less than what we consider it should be after making the regulation allowance, then the owner of the spirits is called upon to pay the difference. That is what we call a chargeable deficiency.

238. Is there a less profit to the Revenue in the case of an older spirit, a spirit that has matured for two or three years in bond, than in the case of the new?—No, it is exactly the same.

239. You mentioned the increase of spirits distilled about 1899 and 1901-2. The spirits distilled in the United Kingdom in those years were considerably more than in the years before and in the years since. Is there any broad explanation of that?—I do not think I gave you that. I simply gave you the quantities which were in warehouse for those years.

240. Not the quantities distilled?—No, not the quantities distilled. I have them here.

241. There was a considerable increase, was there not, about the year 1900?—Yes, the biggest year is the previous year, 1898-9, that is the year ending 30th September, 1899. That is the biggest year we have.

242. I do not want to elaborate the point, but could you say generally is there any general explanation for the great increase about that time?—I really do not know. It is simply what is known in the trade, I believe, as the whiskey boom. There were a number of new distilleries started about that time, and just before, and the stocks, of course, went up accordingly.

243. You mentioned certain distilleries where yeast making is the principal trade?—I would not say principal.

244. Or one of the principal?—It is a very important branch.

245. Could you tell us where they specially are? In locality, are they mainly in the North of Ireland?—No, I think there are more in Scotland. I am sorry I have not those figures with me.

246. You can, perhaps, give us a list of them?—Yes, if necessary.

247. I think that would be necessary?—That is really giving information about individual distilleries. I could give you the number of the distilleries in each of the three kingdoms, if that would suit you? I really only sit here as an official, but I am ready to give anything that is necessary.

248. With regard to materials used, I gather that the distiller gives certain returns or certain information to the Excise authorities as regards the materials of which his wort is composed?—Yes.

249. You take those from the distiller?—Yes.

250. There is no special control by the Excise authorities as to what he uses, but the distiller tells the Excise authorities what he does use?—Yes.

251. That can always be checked, I presume?—No, I do not think it can.

252. You would know if you had an inaccurate return, perhaps?—Within certain limits only.

253. Does the distiller keep books which show, as a rule, what his ingredients are?—No doubt he does.

254. And the Excise officer would have access to them if he wanted?—No. Of course, as you know, we have access to all his premises. We can see what he has got there.

255. With regard to the knowledge which you told us that the Excise officers have of the spirits in bonded warehouses, I understood that in distillery warehouses (correct me if I am wrong) you know practically the composition of any spirit that is there, that is to say, the time at which it was distilled, its specific gravity, and other things about it, and you know what additions have been made to it in bond?—Yes.

256. In a distillery warehouse you practically know everything with regard to it?—Yes.

257. But in outside bonded warehouses—what is the appropriate term for them?—General warehouses.

258. Yes, in general warehouses, blends may take place of spirits which come from other warehouses?—Yes.

259. And in that way the record of the origin of the different spirits would be lost, or might be lost?—That is so.

260. It would require some re-arrangement at any rate to trace it—some arrangement of forms and things which you do not possess at present?—Yes.

261. Are any of the particulars that are available to the Inland Revenue Excise authorities as a result of their supervision also available to the trade in any way—for example, as to age? Are any particulars that are given to the Inland Revenue authorities, or are required by the Inland Revenue authorities, about age available to purchasers or to traders?—All spirits except blended spirits have the year of origin marked on the cask.

262. They have the last year?—If they are blended at a distillery they have the last year, and if they are blended in a general warehouse they have what we call the "Operation Year"—that is, the time that they were operated upon.

263. Is there any reference either by mark on the cask or otherwise to any documents or books which will show what has happened to the spirits at the time of operation?—We could trace the account in our books, that is, every cask is identified in our books.

264. Are particulars as to the origin or the nature of particular blends ever given for export purposes?—No.

265. Are they ever asked for to comply with the food laws of foreign countries?—No.

266. There are some Australian regulations, are there not, about the time which spirits must be kept in bond?—Yes, they have a regulation to the effect that the spirits must have matured two years in wood.

267. Do the authorities assist in any way there?—We do not.

268. It is left to the declaration by the exporter?—Yes.

269. Does the keeping of foreign spirits such as rum and brandy in bond come much under the Excise supervision, or is that mainly the Customs work?—It comes to us because in all general warehouses we have foreign spirits, but the Customs deal particularly, and I might say they deal entirely, with the importation regulations.

270. You can tell me this, no doubt. Are there not some distinctions that are made between foreign spirits? For instance, you recognise, do you not, rum and artificial rum in the case of foreign spirit?—Yes. There will be a Customs witness here presently, and perhaps he can deal with that.

271. That is why I asked the question. You told us about methylated spirits made from molasses. Could you say whether, when it is made from molasses, it is cheaper than the cheapest form of patent still spirit that could be got from grain?—I can hardly give a reply to that. I should think it is, or else they would not have it. It is the cheapest form of patent still spirit that is made.

272. You told us about the practice of the dealers who purchase or obtain blended whiskey or blended spirit from bond. They have to receive a certificate or the person who supplies the spirit has to give the Excise officer a request?—Yes; a permit.

273. There are particulars that are entered in the permit. I see there are marks and numbers of

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casks, and so forth, on the form. Would those marks in any way enable the age or character of the spirit to be ascertained?—There would be the age of the spirit. If it comes from distilleries, as I said just now, the year would be on.

274. What do you say in the case of blended spirit?—In the case of blended spirit there would be simply the year of operation upon it, and not the age of the spirit.

275. Excise officers have power of entry into a publican's premises?—Yes; those are the retailers that I speak of, and publicans would come under that head.

276. In the case of publicans, do they ever have any occasion to trace back the origin of a particular spirit sold by a publican?—No; I have never known of a case where it has been necessary.

277. There is no machinery or system or form of entry which enables that to be done?—No.

278. With regard to distilleries generally, you are the only officers, either Government or local, who have the right of entry in those premises?—That is so. Of course, they are inspected under the Factory Acts.

279. As regards the composition of the spirit?—Not as regards the composition of the spirit.

280. No officers under the Food and Drugs Acts, for instance, go there?—No.

281. (*Chairman.*) You told us just now of the difference in price between pot still whiskey and patent still whiskey. Does your general knowledge enable you to say what is the reason of that difference in price?—No; I do not think I can express an opinion upon that.

282. I do not want any details, but can you tell me this: Does it depend upon the commodities out of which the two different whiskies are made?—To some extent, it does; and the cost of production, no doubt, influences it.

283. Is there any other reason, except cost of production?—No, I think not.

284. Very well. You also told us of the blendings. Of course, they vary very much, pot still being very small in some and large in others. When that blended whiskey is sold, is it sold all at a uniform price?—No.

285. What regulates the price there?—The initial cost of the spirit will regulate the price there.

286. If the proportion of the pot still is great and the patent still is little, the price is high?—Yes; and, of course, the age also will affect it.

287. I was coming to that. But that would be the primary distinction in price between those two?—Yes.

288. Do you think any member of the public, if he had got a bottle of pot still whiskey with 6 per cent., and by the side of it a bottle of pot still whiskey with 80 per cent., could tell the difference if he drank it?—I expect any whiskey-drinker could.

289. What would it be—the greater strength?—No; it would not be the strength but the flavour—the aroma.

290. Is there a uniform flavour of pot still whiskey?—No.

291. Then if there is not a uniform flavour of pot still whiskey, how could he tell, if he was tasting the two, which contained pot and which contained patent?—When I say there is no uniform flavour, I mean different distillers produce spirits of different flavours, but still there is the pot still flavour in all the pot still spirits, and yet the pot still spirits will all differ when coming from different distilleries.

292. I always understood there was a difference between Irish and Scotch whiskey from the fact that in Scotch whiskies the malt was made over peat and the Irish over coal, and there was, therefore, the flavour of the peat permeating the whiskey so that a person could tell Scotch from Irish?—Of course, Irish whiskey is made partly from grain.

293. I know that, but is there not also that distinction between the peat being used in Scotland and not in Ireland?—Yes, I think so.

294. What is the power of an ordinary person in drinking, say, two pot still whiskies, to tell, by tasting, the difference—to tell whether one came from the Highlands or from the Lowlands. Could he tell the difference?—I think you are really asking me more than I am prepared to say.

295. I do not wish to press you, and I will ask a later witness. Perhaps you would rather say you could not help us on that point?—I do not think I could. A whiskey merchant would be able to tell you.

296. And it may be that persons of great experience might?—Yes.

297. But to take the ordinary public, do you think that they can trace the difference between pot still whiskey and patent still whiskey, assuming them to be made of good materials? Do you think an ordinary person could tell the difference?—I think he would if he was in the habit of drinking whiskey.

298. You see a great many persons now are taking whiskey instead of wine for the sake of their health. Do you think such a class of drinker could tell the difference between the two?—I think he could if he had the two together.

299. How would you describe the difference yourself?—I am afraid that is getting a touch of metaphysics.

300. Not at all. I suppose there are known brands of whiskey—Cambus and other brands that are known?—Cambus is a patent still distillery. They call it a whiskey, I know.

301. Have they a reputation on account of the whiskey they produce?—Really I would rather not express an opinion. I really cannot say with regard to these matters.

302. I only want, as regards these different products that are employed in patent still whiskey, your general knowledge. In the first place, as to your general knowledge, have you examined the books at all of the distilleries to see what materials they were using?—No, we never do that.

303. Do they ever give you returns of the products they use?—Of the materials they use?

304. Yes?—Yes, we get those particulars; they have to do that every week.

305. Have you any objection to state them? In the patent stills is maize a considerable ingredient that is used?—Yes.

306. As high as 75 per cent.?—I think it will run quite as high as that.

307. It is substantial?—Yes, very substantial.

308. And that is the principal ingredient in which the difference from the pot still arises?—Yes.

309. Have you any knowledge of this—do not answer if you have not—does maize make a more stimulating spirit than malt or is it a comparatively innocent ingredient, I will call it?—Its value to the distiller is the large proportion of starch which is in it, which, of course, is converted into sugar. All the distiller wants is a saccharine.

310. That is one of the reasons why production of patent still is cheaper—that maize is cheaper than malt?—That is so.

311. Are those qualities beneficial, do you think, to the person who consumes?—That I cannot say.

312. (*Dr. Cushny.*) Can you give us any impression as to how much patent still spirit is actually used for drinking purposes and not produced for arts purposes?—Drunk alone, do you mean—unblended?

313. No. Used for blending; what proportion of that?—I gave you the proportion of a number of blends. I could not give you the proportion throughout the country.

314. (*Chairman.*) You gave the number of the distilleries where the pot was produced and the patent was produced, but that does not meet the question.

315. (*Dr. Cushny.*) I want to know the proportion of the total that was used for arts and the proportion that was used actually for drinking purposes as potable spirit?—You cannot get at that, really, because a large quantity of the spirit from patent still distilleries goes to the rectifier for rectification.

316. You cannot subtract that from the total?—No; I have no figures with regard to that.

(*Chairman.*) The Commissioners are obliged to you for your evidence.

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

SECOND DAY.

Tuesday, 3rd March, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. AARON RICHARDSON, called.

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317. (*Mr. Guillemard.*) What is your position under the Board of Customs?—I am an inspector.

318. I think you have had considerable length of service?—Thirty-nine years.

319. I want to explain the sort of evidence the Commission will ask from you to-day. It will be explanatory, and will fit in with the evidence that Mr. Tedder gave yesterday which was connected with British spirits, and will fill up the gap so far as foreign spirits are concerned. That is to say, spirits imported from abroad. The points on which we shall ask for your evidence will be these: the different denominations of spirits that are imported from abroad, the amounts of such spirits, and the countries of origin from which they come. It will be mainly on those points that you will be asked to give evidence, because when you come to bonding and the regulations under which spirits are kept in bond and the operations that are allowed there, and the supervision of the Revenue officers, I take it that the statement made by Mr. Tedder yesterday is accurate as representing what happens at the Customs too?—They are precisely the same.

320. Then as to points connected with the public health and the Merchandise Marks Act, the Customs have definite functions in those connections, but the Commission understand that another witness will come from the Customs, a member of the Board, who will give evidence on those points, so that the Commissioners will not trouble you on them?—That is so.

321. Perhaps you would begin by telling us what are the different sorts and descriptions of spirits that are imported from abroad?—Mainly brandy, rum, Geneva, imitation rum, and unenumerated spirits.

322. What do you mean by unenumerated spirits?—Liqueurs, cordials and plain spirits.

323. Unenumerated spirits, I think, means spirits that have no specific names, such as rum or brandy?—Yes; spirits which have no specific tariff rating.

324. Unenumerated spirits of what sort?—Chartreuse, Benedictine, Curacoa, and that kind of liqueur or cordial.

325. Perhaps you would begin with brandy?—The duty on brandy is 11s. 4d. a gallon imported in cask, and 12s. 4d. a gallon imported in bottle.

326. Per proof gallon?—Yes. The great proportion of brandy comes from France, but we also get small quantities from Spain, Egypt, California, and Australia.

327. There being no legal definition of brandy any more than there is a legal definition of whiskey?—That is true, but the officers never question it unless from the strength, the colour, or the taste, they have any suspicion that it is not the ordinary brandy of commerce, in which case they submit a sample to the analyst, and finally to the Board for their decision.

328. That is on importation?—Yes.

329. Does that cover all you have to say about brandy?—Yes, those are the main items about brandy.

330. Then rum?—Rum is the same duty, 11s. 4d. in cask per proof gallon or 12s. 4d. if imported in bottles. A great deal of rum comes from the West Indies, Mauritius.

331. It always comes from sugar-producing countries?—Sugar-cane-producing countries.

332. And it is made there?—It is made there from the sugar cane. We also have imitation rum chiefly from Germany, but it has to be so described on importation.

333. That is plain spirit made in those countries and flavoured to represent rum, is it not?—That is so.

334. It is sometimes flavoured with essence of genuine rum made in rum-producing countries?—In all probability. Of course, we have no means of ascertaining that thoroughly.

335. Then Geneva, which is gin?—Yes.

336. Is Geneva and gin the same thing?—Yes, it is imported mainly from Holland.

337. What is the difference between Hollands and gin?—I do not know that there is any difference in manufacture.

338. It means gin imported from a particular place?—From Holland. That is the main country of importation for Geneva.

339. (*Mr. Horace T. Brown.*) It is known as Hollands?—Not necessarily, all Geneva which comes from Holland is known as Hollands, but that is a common name for gin imported from Holland also.

340. (*Mr. Guillemard.*) Then we come to the unenumerated spirits. They form classes, do they not?—No, except that they are sweetened and unsweetened, and they can be entered by the merchant to be tested for the actual proof strength of spirit in them, or they can pay the higher rate of duty of 16s. 4d. a gallon without being tested.

341. That is the sweetened?—Yes.

342. (*Mr. Horace T. Brown.*) What is the duty when distilled?—11s. 7d. in cask, and 12s. 7d. in bottle.

343. (*Mr. Guillemard.*) Is there a class of spirits called perfume spirits imported?—Yes, such as eau-de-Cologne and Florida water.

344. Not potable?—Not potable in the strict sense.

345. I think you can hand in a table of the quantities and the declared values of spirits imported, say, for the last ten years, showing the countries from which it is imported and any similar tables for re-exports?—I have that information for the last ten years. (*See Appendix C.*)

346. Now we have got the classes of spirits, perhaps you can tell us shortly what the procedure is when the spirit reaches this country. I think you call that stage the stage of report and entry?—The master of every vessel on arriving in this country has to report the whole of his cargo. Of course, if spirits be part of the cargo, he would report them, and then before conveying to the warehouse at which it is intended to

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warehouse them an entry has to be submitted giving the description of the spirits. I have the form here.

347. He would describe them as belonging to one of the classes you have mentioned?—Yes, giving the description in accordance with the tariff rating. (*Specimen form handed in.*).

348. When you have got your spirit described in these proper classes how do you ascertain the amount?—By a system of gauging. This is a practice which has been in existence for a great number of years at the Customs. The contents and the actual quantity of spirit in the casks is obtained by means of measurements by certain rods having mathematical lines of figures.

349. That gives you the amount in the cask?—That gives the number of gallons in the cask.

350. Then the next thing is the calculation of the strength?—A sample is drawn from each cask. Ordinary spirit imported is tested by Sykes's hydrometer for the hydrometer strength.

351. Is that the same procedure as Mr. Tedder described yesterday?—Exactly the same, and in the case of obscuration it would be dealt with in exactly the same way as Mr. Tedder has described.

352. Then he really has covered that ground?—Yes.

353. Then after that the spirit passes into a bonded warehouse, and there, I think, Mr. Tedder's account was very full, and it covered the ground?—The operations in Customs warehouses are exactly the same as those in Excise warehouses. We are governed by the same code of regulations.

354. Then they go through the Customs warehouse, and when they leave the Customs warehouse and duty is paid they pass out of the Customs control altogether?—We have done with them.

355. And they come, so far as they are supervised at all, under the control of the Inland Revenue Department after leaving the bonded warehouse, as Mr. Tedder described yesterday?—They are liable to be called upon for the permit.

356. (*Dr. G. S. Buchanan.*) The spirits that are imported and are entered in the ship's report that you have mentioned, would be entered, I take it, under the name of the actual spirits that were concerned?—Yes.

357. You mentioned Curacoa, and so on?—Not necessarily the unenumerated spirits. Brandy would be called brandy, and Geneva Geneva.

358. The names in which they would appear in the ship's report would not necessarily be the same names as those in which they appeared in your classification, would they?—That is true.

359. Practically you would take the description in the ship's report and put it under one or other of your recognised heads?—That is so.

360. You told us about the different countries from which brandy might come. Would any brandy that was imported be marked as brandy, and would it have to be marked on the casks or on the bottles?—Not necessarily.

361. If it was marked on the casks or on the bottles would the country of origin have to be shown?—That will be dealt with by another witness.

362. Then I will not ask you anything about the marks. And in the same way with regard to the distinction you mentioned between rum and imitation rum, should I ask you or the other witness as to what is the circumstance that guides you in that classification? Is it the country from which the rum has been imported?—That is so. In the case of spirits entered as rum from countries in which the sugar cane is not produced, the importers are required before the entry is finally accepted and acted upon to produce the bill of lading from the original port of shipment, and certificate of the landing at, and exportation from, the port of transhipment or exchange.

363. Are you concerned at all in your Department with the exportation of spirits?—Oh, yes, we have to do with the exportation from the bonded warehouses.

364. In Customs bonded warehouses are spirits bottled for export?—Oh, yes, frequently.

365. Those spirits which are so bottled in the case of British spirits have in many cases been in bond throughout, have they?—They would have been removed from the distillers to the Customs warehouse in the first instance before bottling.

366. Have you any concern in the description which is given to British spirits when they are sent abroad?—No, we do not interfere with that at all.

367. Or with the declarations that are made by exporters as to the character of the spirits going abroad?—We have no control over that.

368. They come to your knowledge, I suppose?—That would be a matter for the indoor department where the declarations would be made.

369. For the purpose of preparing lists of exports from this country I presume some sort of classification would be necessary?—A return of all goods in vessels outward bound is to be made within six days, and that would be forwarded to the Customs authorities.

370. Would the word "whiskey" ever be used in connection with any of those classifications, or would they be all plain spirits?—British plain spirits only.

371. (*Dr. Adeney.*) You mentioned just now that sometimes you have occasion to get analyses made. I take it that that is only to determine the alcoholic strength?—It is to obtain the percentage of obscuration caused by matter in solution which is then added to the hydrometer strength, and also to determine how a doubtful article should be classed.

The witness withdrew.

Mr. Arthur Mellor Bramall, called.

Mr. A. M. Bramall.

(*Chairman.*) It may be well to explain that the Commission wish to hear both sides of the case that was presented at Islington and the Clerkenwell Sessions, out of which this Commission has probably to a great extent arisen. This witness now at the table will put the case which was presented on the part of the prosecution, and immediately his evidence is over a professional gentleman will put the case presented on the part of the defence, so that both sides of the case may be heard.

372. You are a solicitor, I believe, practising in the City of London?—Yes, that is so.

373. And you are also the standing solicitor to the Islington Borough Council?—Yes.

374. Your attention has been directed to the proceedings which have had to be taken from time to time, under the Food and Drugs Act of 1875, and also the Public Health Act of 1891?—Yes.

375. In 1904 was the attention of the Islington Council directed to certain sales of whiskey?—Yes.

376. And were you directed to make inquiries, and to advise as to what proceedings should be taken?—I did not make inquiries at that time as to what whiskey was. That was done largely by the medical officer.

377. But were you directed to put those inquiries in motion?—Yes; certainly.

378. Dr. Teed was your public analyst?—Yes.

379. Was the result of what was determined upon that two samples of whiskey were bought—so-called whiskey—one from a licensed victualler and one from an off-licensee?—Yes. I may say, my Lord, that 15 samples were taken, altogether haphazard, in one particular part of the borough, and of those 15 one only was found to be genuine.

380. You must not use that word at present. You should rather say, came up to your standard?—Came up to our standard. In two cases we considered the adulteration was so slight that it was determined not to

take proceedings, and 12 summonses were issued, of which two were taken as test cases.

381. I do not know whether there is any objection to mentioning the names of these persons. The licensed victualler was Mr. Wells, and the off-licensee was Mr. Davidge?—Yes.

382. In order to ascertain what were the facts, I suppose, you had to cause purchases to be made through your officer?—Yes; through the inspector.

383. In the case of Mr. Wells, the licensed victualler, his was the sale of so-called Irish whiskey?—Yes.

384. The off-license sale was with regard to Scotch whiskey?—Yes.

385. Take Mr. Wells' case first. What was the purchase there?—It was Irish whiskey, and it was one pint, and the price charged was 2s. 4d. That would give a price per gallon of 18s. 8d. It was sold 25° under proof, and that would be equivalent, if the spirit had been proof, to 24s. 11d.

386. Take the 11s. off?—Take the 11s. off for the duty, and that would mean 13s. 11d. per gallon for proof spirit.

387. That was the retail price the licensed victualler charged?—That was the price he charged.

388. Had you any evidence as to what was the cost of that Irish whiskey to the producer, when selling it from the distillery?—Oh, yes. The defendants gave evidence of how the whiskey had been mixed and blended, where it had been bought, and what it had cost them. They called the wholesale people.

389. Where did it come from?—It came from Messrs. Kirker, Greer and Co., of Belfast.

390. Did they send it direct to the licensed victualler?—They sent it direct to him. I think it came to the docks here, and then their London house sent a cart for it.

391. Now, as to the cost?—They had bought it from two places. It was, according to their account, 90 per cent. of patent still spirit—made in Belfast, I suppose—which had cost them 1s. 3d. a gallon, and 10 per cent. of pot still spirit. I do not know the price of that pot still spirit, and I do not think it was stated.

392. It would be a higher price, I suppose?—It would be higher, certainly. That was mixed or blended in Belfast.

393. 90 per cent. of the patent still spirit and 10 per cent. of the pot still spirit, blended and made into the compound?—Yes, in Belfast.

394. It was sent to Mr. Wells, or through someone to him, and there was no change in it, was there?—No; none at all.

395. Do you know what price was charged by the Belfast distillers to Mr. Wells?—10s. 4d. a gallon, duty paid, 24 under proof.

396. Then you must take the 11s. off?—Not 11s., because it was under proof.

397. It is 8s. at 75 per cent.?—I take off 8s. 3d., and that would leave 2s. 1d.

398. I am sure you will be careful only to state those facts which were proved by the defence?—Yes; they were proved by the defence. I have the invoices here that were produced, and I have taken the price from the invoices.

399. What was there, by way of statement, on those bottles—still keeping to Wells' case?—There was no statement on Wells' bottle. There was no label on at all.

400. What were the instructions given to your officer? What was he to ask for?—He was to ask for Irish whiskey.

401. Without any description beyond that?—Yes; simply Irish whiskey.

402. Of course, the 90 per cent., according to you, is patent still whiskey?—Patent still spirit.

403. I will not say I accept your judgment on that question; but I was going to ask you, do you say that is whiskey or not?—We say it is not.

404. That is your contention, right or wrong?—Yes; that is our contention, right or wrong.

405. It is made in Ireland?—It was made in Ireland, probably.

406. Of what material, as far as you know?—I think it was stated—this is what they said, and we could not check it exactly——

407. When you say "they," whom do you mean?—I mean the distillers, Messrs. Kirker, Greer and Co.

408. All this is in print, if necessary, and you can refer the Commissioners to it?—Yes. It was distilled from a mash consisting of malt, 27·19 per cent.; rye, 37·23 per cent.; and maize, 35·58 per cent.

409. I suppose, as to the 10 per cent. pot still, you have no care about that?—No; that did not transpire. We did not trace that. It was, no doubt, pot still whiskey.

410. I think that traces through Mr. Wells's sale?—Yes.

411. Now will you come to the case of Mr. Davidge?—Mr. Davidge's sample was bought from Messrs. Stevens, Buer and Co., 27, Mincing Lane, London. It was bought without any description of quality on Mr. Davidge's part, but simply according to the price, so much per gallon. It was invoiced to him as "One octave fine Scotch whiskey 35 per cent. under proof." This spirit was mixed by Messrs. Stevens, Buer and Co. themselves in Mincing Lane.

412. Did they carry on the business generally of blenders?—Wine and spirit merchants, but I imagine they do blend themselves. They did in this case at any rate.

413. That would be quite consistent with a wine merchant's business—there is nothing objectionable in it?—Oh, no. They obtained the patent still spirit or the grain spirit from the North of Scotland Distillery, and the pot still with which they blended it in the same proportions of 90 per cent. of patent still and 10 per cent. of pot still whiskey they said cost them 2s. 8½d. a gallon. I do not think it was stated what the patent still spirit cost them.

414. That is an important point—that is 90 per cent. of patent still spirit again?—Yes.

415. Was there no evidence of what the patent still spirit cost?—Yes, I find I have got it—1s. 1½d. a gallon, and they watered it down to 33 per cent. under proof. The cost therefore if you take the one-tenth of the pot still, and the nine-tenths of the patent still and then water it down would be 10½d. a gallon, without duty of course. The pot still spirit was distilled in 1901 according to the invoice. This was purchased in 1905 so that the pot still spirit was then 4 years old. The grain spirit was 6 months old at the time it was sold to Davidge. It was sold and invoiced as "Grain aqua," and I ought to have said in the Wells' case the patent still spirit was not invoiced as whiskey, but it was invoiced as "patent still spirit."

416. That was according to the fact?—That was the invoice sent to Messrs. Kirker, Greer and Co.

417. That is quite right—90 per cent. was patent still spirit?—Perfectly right. I mentioned it to show that in the trade it was called patent still spirit and was not called whiskey in the invoice.

418. It was invoiced as patent still spirit according to the facts?—Yes. The grain aqua was said to have been distilled from 25 per cent. of malt and 75 per cent. of Indian corn or American maize, which is the same thing. It was 6 over proof when sold to Messrs. Stevens.

419. I do not think we have got the price of Davidge's?—No; it was sold at 9s. 4d. a gallon. It was 33 per cent. under proof, and the duty would be 7s. 4d., so that the price to Davidge without duty would be 2s.

420. And he sold at what?—He sold it for 15s. a gallon as it was—33 per cent. under proof. He paid 9s. 4d. and sold at 15s.

421. That would be fair I suppose. There is no complaint as to the profit?—No.

422. What were the marks upon Davidge's bottles?—Davidge had, I suppose, put a label on—"Fine old Scotch Whiskey." I have the bottle here if you would like to see it.

423. You might as well produce it?—*This* was 90 per cent. of it a year old. (*Producing bottle.*)

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424. When it came to Davidge would it come in bottles or casks?—It came in casks, I think.

425. Then he would bottle it?—I think so. That is the original bottle in which it was sold and has the label upon it "Fine old Scotch Whiskey." The invoice is "One octave," so, I suppose, that would be a cask.

426. What is "The Golden Lion Brewery"?—That is what he calls himself.

427. It is said to be 33 per cent. under proof?—Yes. They under-stated it because it was 31. There was no dishonesty about that. It was perfectly fairly sold.

428. These are the bare facts of the purchases and of the materials of the two purchases that were made?—Yes, my Lord.

429. Upon ascertaining these facts I believe the Council were advised that it was their duty to take proceedings?—Yes.

430. Were those proceedings taken under the Act of 1875?—Yes, under section 6 of the Act of 1875.

431. And proceedings were in the first instance taken before the learned Stipendiary Magistrate, Mr. Fordham?—Yes.

432. You appeared on behalf of the Islington Borough Council?—Yes.

433. I believe you had a very substantial array of counsel against you?—Very formidable indeed.

434. Mr. Fletcher Moulton and others?—Yes, Mr. Fletcher Moulton, Mr. Walter and Mr. Lane.

435. Mr. Fordham convicted?—Yes, in both cases.

436. Then there was an appeal to the magistrates at Clerkenwell?—Yes, at Quarter Sessions.

437. And there, counsel had to appear on both sides?—Yes.

438. The Court were equally divided in numbers so there was no conviction?—That is so.

439. The matter therefore stands on the views of Mr. Fordham, and the appeal was not successful against him?—The appeal was abortive.

440. It was not renewed in consequence of these proceedings?—That is so.

441. I want to know from you how you presented your case. In the first place can you hand to me a copy of the summons?—I have the summonses in both cases.

442. I suppose they are exactly the same?—There is a little difference in the definition of the two spirits. (*Copies of summonses produced and handed in.*)

443. "That you did by your agent sell to George Payne to the prejudice of the purchaser a certain article of food and drug, to wit an alcoholic liquor, which was not of the nature, substance, and quality of the article, to wit Scotch whiskey, demanded by the purchaser, the said article so sold consisting entirely of patent still or silent or neutral spirit—not whiskey." That was the substance of the charge in both cases?—In both cases, yes.

444. You had charge of this case?—Yes.

445. In order to support that summons, what was the case that you presented, and what was the theory of it? What did you state was this compound that the purchaser bought?—I said that taking Wells' case first, which was the Irish whiskey, that Irish whiskey had been asked for and that Irish whiskey was a spirit distilled in a pot still from malted and unmalted barley with small permissible additions of wheat, rye, or oats, or any of them, that is grain indigenous to Ireland, and, of course, distilled in Ireland. Even if you had these materials you could not distil Irish whiskey in London on the ground, among others, as to the geographical description that the Irish water is a material thing to consider in the production of whiskey, or, indeed, of any spirit, but as this was largely—we said entirely—spirit distilled in a patent still largely from rye and maize, the maize and the rye probably coming from America—the maize certainly—that it did not come within the definition of Irish whiskey, and that the purchaser was prejudiced. You have to prove under Section 6 that the purchaser is prejudiced because he had got a much cheaper article than he had asked for, a much less well-flavoured article, a different article, and one that in many respects was inferior.

446. Let us go by steps to your definition. In the first place, as to this being Irish, and as to it being sold as Irish, you could have nothing to say because it was made in Ireland?—When I opened the case I did not know where it was made.

447. But you have got it now?—Yes, I admit that.

448. Had you anything to say as to the inferiority or otherwise of the ingredients that were in the patent still compound?—Yes, the maize and the rye.

449. Was that in contrast with what you said ought to be malt?—Malt and unmalted barley with small additions of other grains.

450. You used the phrase "definition of whiskey." Where do you get that definition from?—The difficulty one has in the Sale of Food and Drugs Act is the absence of any legal standard for the great majority of articles of food. Drugs are defined by the British Pharmacopœia, but the want of a standard had led us often into serious difficulty and serious expense, in endeavouring to form a standard, and we had to form or ask the magistrate to form a standard upon the evidence given to him. We had formed our own idea of what the standard should be largely on the definitions that had been given in evidence before the Committee of the House of Commons in 1891, in which I am right in saying that all the witnesses who were not trade witnesses adopted very much our definition, or rather we adopted very much their definition of what Irish and Scotch whiskey ought to be.

451. First I understand you to say the ingredients should be of malt or unmalted barley?—Yes, that is the greatest proportion.

452. The main ingredient?—Yes.

453. Now you also have a second requirement that it should be pot still instead of patent still?—Yes.

454. Pot still has existed from all time in connection with the manufacture of whiskey?—Yes, for centuries.

455. Before the Monopolies Act?—Yes.

456. And the patent still was patented by a man of the name of Coffey in the year 1830?—1831, I think it was, as a matter of fact.

457. And has it been employed very much since?—Yes, but not for the production of a potable spirit for many years after that. Perhaps I may go into that later.

458. You may go into it now. When was it that the patent still of Coffey came into operation for potable spirits?—Perhaps I am wrong. The original patent in 1831 was not for the production of patent still spirit. I have the original specification here.

459. I do not care for the exact particulars. How many years has Coffey's patent been used for the manufacture of potable spirit?—In various forms, not in the form you see it there. Since 1831 no doubt it was introduced into common use very soon afterwards, but the idea of making whiskey from it is, I believe, quite a modern idea.

460. Is it 40 or 50 years?—No, not so long as that, I should think. It is difficult to tell when it began. Probably it began more or less without it being known. It is a practice that has grown up, and, of course, has very largely increased.

461. Your view is, that the term "whiskey" by itself might well be applied to all these substances that you have had to deal with?—Yes, if made in a pot still.

462. And it may be inferior like the Bourbon whiskey?—Yes.

463. Bourbon is foreign whiskey for the most part made almost entirely from maize, or, at all events, with no malt and mainly, perhaps, I should say, from maize and rye?—Chiefly from maize. I do not think it is made from rye.

464. You would not object to that being sold as whiskey?—Oh, no.

465. A good many persons, the ordinary public, purchasing would ask for whiskey generally, would not they—some say "Scotch" and some say "Irish," but a good many people would say "Give me a glass of whiskey"?—If you ask for whiskey the barman generally asks you whether you would like Irish or Scotch.

466. That is if they have both in hand. But supposing a man went in and said: "I want whiskey," and

the tradesman chose to give him this Bourbon whiskey, this maize whiskey, according to your view that would not be an infringement of the law as it now exists?—I think not. I do not think the purchaser would drink it. He would know directly he was not getting what he expected from the taste.

467. *A fortiori* the patent still spirit would fulfil the name of whiskey as much as pot still spirit?—I think not.

468. If Bourbon whiskey was sold under the name of "whiskey" generally, why should not patent still whiskey be sold under the name of whiskey?—Because the Bourbon whiskey made in the pot still preserves the flavour that would come from the maize, but putting maize through a patent still the flavours practically go. You have got more or less a silent spirit.

469. Then what does it become?—It becomes largely alcohol and water.

470. Does your view go to this extent, that it would not fulfil the name of whiskey at all?—Not at all.

471. Does that refer to all patent still whiskey?—To all patent still spirits.

472. You say, therefore, that no patent still manufacture can fulfil the name of whiskey?—Certainly.

473. We know there have been enormous quantities of this patent still whiskey manufactured and sold?—Yes.

474. Do you think an ordinary customer would tell the difference between the patent still whiskey and the pot still?—Do you mean the unmixed patent still as it comes from the still?

475. Take that first?—I think he would, certainly.

476. Can you describe in what way it would differ from the pot still as to flavour?—It is very difficult to define flavours. It would have none of the taste of whiskey in it. It would taste like spirits of wine.

477. Why is it that the patent still should produce such a very marked difference in the result?—The method of distillation in the patent still was intended to do that.

478. What is the method?—I do not know if you would like to have the model of the patent still brought forward?

479. Yes, I think it would be convenient. (*The model of the patent still produced.*)?—You ask me why I made that statement about the patent still. First of all, to differentiate it, in the pot still practically the whole of the volatile elements come over together and go into the same condenser and are condensed together. May I say in addition to the ethyl-alcohol, which, if you will allow me, I will call alcohol simply—if I mean any other kind of alcohol I will give it a separate name—but ethyl-alcohol and water are common to all spirits of every kind, and form by far the largest proportion of the elements of which the spirit is made up. I think 99·75 per cent. of every spirit is alcohol and water, but the remaining one-quarter per cent. is what I call the secondary products of the substance, the wash distilled, which differs according to the materials from which the spirit has been distilled. I mean it is that quarter per cent. which distinguishes brandy from whiskey and whiskey from rum. It consists chemically of the higher alcohols, that is, alcohol boiling at a higher point than ethyl-alcohol, aldehydes, furfural, ethers, and acidity. Those five things are what I venture to call the secondary products. The French call them impurities, that is, they were impurities in pure alcohol, but I think it is a misleading term for this purpose, because they are the very things which distinguish whiskey from any other spirit.

480. It strikes an ordinary person that it is strange that this quarter per cent. of the secondary products should produce such a marked alteration?—It is strange.

481. Where does that come from?—I do not think anybody knows.

482. How are those products produced?—In the distillation in the pot still.

483. Does it depend on the product that has to be distilled?—Yes.

484. Therefore you get a different secondary product from barley or from the malt than you would get from the maize?—Yes, quite different.

485. How is it that one produces brandy and the other rum?—Brandy is distilled from the grape, and therefore you have in the brandy the secondary products of the grape, and they differ in proportions among themselves when they are derived from brandy from the proportions when they are derived from malt, but the same chemical elements are there, and, if I may venture to say so—it is perhaps going rather further than I ought—whether it is these things to which the chemical names have been given or whether it is some substance that chemists have not yet been able to identify or to describe which gives the flavour to the spirit, I think is not quite known; but this, I think, is certain, that if you eliminate the secondary products you eliminate the flavours and the bouquet, and the only thing that differentiates one kind from the other, so that if you eliminate, as you do for the purpose of making gin, the secondary products, you get pure alcohol, and it does not matter what materials it comes from. The pure alcohol derived from the grape is just the same as the pure alcohol derived from the barley, if you eliminate the secondary products.

486. In what shape do these secondary products show themselves if you analyse? Are they demonstrable?—Yes, I think so. I do not like to speak about it, but they will answer to the tests. I can give them to you, but it would simply be second-hand. All these elements are found by analytical tests.

487. We were upon the patent still?—I wanted to say how the patent still has the effect which we say it has. The main principle upon which the patent still works is that these things are evaporated at different temperatures and therefore condense at different temperatures. The ethyl-alcohol condenses, I think, at 172° or 173°—I am afraid to mention these figures in the presence of these gentlemen, but I think that is substantially right.

488. You can do it without prejudice?—I hope I shall be corrected if I am wrong. 212°, as you know, is water, and roughly the higher alcohols evaporate at a higher temperature than water, and therefore condense at a higher temperature than water. I have got it from books I have referred to that the higher alcohols (there are four or five sorts of them) evaporate at from 270° F. to 278° F. That is not an exhaustive statement, but I think it is practically right. The ethers are very volatile indeed, and they evaporate at about 94° F.—very much less than alcohol. The aldehydes vary very much, but all are more volatile than ordinary alcohol, and the furfural is very, very much higher in its boiling point—it is 325°. So that you have all these things evaporated, and therefore condensing, at different temperatures. The patent still is constructed to condense these various substances at their respective temperatures, and to separate them, and, to distinguish between the pot still, where they all go over together and are condensed together, in this still they are condensed separately, and go into separate receptacles. It is worked in this way. *This* is the analyser and this is the rectifier (*pointing on the model*). In this the evaporation takes place, and there is this marked difference between the pot still and the patent still: the pot still is almost always heated by direct fire heat. Mr. Tedder, I think, said there was a steam jacket occasionally used, but it is exceedingly rare. There may be one or two in Ireland and not more, but the steam jacket is outside the pot still, and the steam never comes into direct contact with the materials to be distilled, and with the evaporation that comes from those materials. In this rectifier the heat is given by live steam which is introduced actually into the analyser itself; the steam actually comes in and the heat of the steam evaporates the various volatile substances in the wash and comes over this pipe here, the vapour of water together with all the vapours that have been volatilised by the heat. Of course I know nothing of this myself, but it is stated by scientific men that the action of the steam mixing with the volatile elements destroys the ethers, and in consequence that one of the more valuable elements of the spirit that is being distilled is lost. Then the principle is this: I do not, unless you wish, trouble you with the way it is worked, but the patent still is a very big thing. It would not come into this room. It is very high—30 feet high. All the way

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down *here* (*pointing to the rectifier*) there are separate chambers about 1 ft. 9 in. high, or perhaps a little more, separated from each other by a copper plate with small perforated holes. One of the improvements in the patent still is that the wash which has to be distilled is used as the condensing material for condensing the vapours that have already been distilled. It comes in here cold, and then goes backwards and forwards as Mr. Tedder said, but the result of that is, coming in *here* cold and down *here*, meeting the hot vapours that have come in this pipe which comes in at the bottom, the vapours at a very high temperature, the wash as it comes down zig-zagging backwards and forwards is gradually cooled, and gradually deprives the vapours of their heat, and so condenses them. This chamber up *here* is the coolest, and this chamber down *here* is the hottest, and as the vapour gradually ascends up this rectifier it is meeting in each chamber a slightly greater degree of cold than it had met before, so that the elements that condense—water, for instance—at a lower temperature than ethyl-alcohol as the vapours ascend, gradually are condensed, and then fall down through pipes which there are in each of these plates till they get to the bottom and run out into a vessel *here* coming out of the bottom, so that by the time the vapours have reached this point (*pointing to the spirit plate*) everything that condenses at a higher temperature than 178° or 172° has already been condensed and dropped down and come down *here*. *This* is what is called the spirit plate—*that* is the spirit pipe, and it is so arranged and is so worked, if properly worked, that the temperature when the vapours reach this plate, is just the temperature at which ethyl-alcohol will condense, everything that condenses at a higher temperature having already become liquid and gone down. *This* is what is called a spirit plate here, that has no holes, and has a ring for the collection of the spirit, and as the ethyl-alcohol vapour reaches that plate it is condensed, becomes liquid and runs down that pipe into this vessel *here*.

489. I do not understand whether this explanation you are giving us is to account for the fact that the taste would go out of the patent still whiskey if there is no blending?—Yes.

490. You say it is the process that does it?—Yes.

491. It takes the spirit out?—Yes, apart from the secondary products.

492. And whether he knows it or not the customer is drinking something which is a temperance liquid?—No, he is drinking alcohol.

493. I understood you to say that this took the spirit out of the alcohol?—But the alcohol that is taken out is the thing that is sold as patent still spirit.

494. Is that pure alcohol?—No, not quite, but it is very near it.

495. I want to understand what this is that is obtained. Do you say that it is injurious to health at all?—It is a question, of course, whether any alcohol is not injurious to health.

496. Some people say it is, but apart from that it is more injurious than whiskey?—Yes, I think so.

497. In what way?—I think that the taste for pure alcohol is more or less a morbid taste. You have not got the flavour.

498. I put it, injurious to health?—Yes. The evidence was, that a man would drink more of the patent still spirit than he would of genuine whiskey. He would not feel that he had the substance, or the taste, or the flavours.

499. And he would not get any forwarder? — He would not get any forwarder.

500. I should think that means that there was not so strong spirit in it?—It does not depend on the strength of the spirit. The strength of the alcohol, which is meant by "strength," can be strong or weak, and yet it is patent still or pot still spirit.

501. That may be so; but I am speaking of the customer, the person who drinks. On which would he get drunk sooner?—I think he would get drunk sooner on the patent still spirit.

502. Why is that?—It is very difficult to say, chemically or medically. I do not know why it is. You are drinking pure alcohol, which is an intoxicating thing, and you have eliminated the flavours.

503. I am talking of the health of the man, and the effect upon him. I do not quite see why it is, after your explanation, that this patent still spirit should produce more drunkenness than the other spirit?—It is difficult indeed to say. I do not think anybody can tell you why. I think it is probable that he would consume more.

504. He does not get any forwarder if he takes another glass?—My own impression is—I may be quite wrong—that the alcohol without any qualification is more likely to take effect on the man's system than alcohol plus the products of whiskey or brandy—that is, you have got the spirit of wine alone, without anything with the spirit of wine, which possibly may help the system to assimilate.

505. But, apart from this temptation to drink more, if a man drank one glass of the pot still whiskey and one glass of the patent still whiskey, which do you say would have greater effect on him, in the direction of drunkenness?—I think the patent still; but I do not speak with any confidence on it.

506. Would it be injurious to his health if he did not take too much?—No; not if it was made from good materials.

507. Assuming equally good materials?—Assuming equally good materials, I do not think it would be any injury to health; but the medical evidence called was that if the spirit was being given medicinally the benefit would not be derived from patent still spirit—that is, the more or less pure alcohol—which would be derived from the whiskey with the secondary products.

508. That was the medical evidence—that it did not pick a patient up?—Yes; it did not have the effect.

509. The doctor said the patient looked as if he had had no spirit at all?—Yes.

510. In your evidence that you have placed before us you state the fact that the patent still spirit is much cheaper to manufacture than the pot still whiskey?—Very much cheaper.

511. Why is that?—Partly because the materials for the pot still are more costly.

512. Is that barley as against maize? — Malted barley, certainly. Of course, you have the extra expense of malting in an all-malt mash, and, I suppose, the prices of grain vary. Occasionally maize may be as expensive as barley; but, on the average, I should say that English, Scotch, or Irish barley would be the more expensive ingredient than maize would be. Maize would be cheaper on the whole, and you avoid the expense of malting to a large extent, and then this process is very much cheaper. In fact, no sane man would use the pot still if he could get the same results with the patent still. *This* (*referring to the patent still*) is a continuous process which is going on automatically. With a pot still you have to draw the fires when you have finished your distillation, and let the still get cold, and then heat it again. I think it was said by Mr. Fletcher Moulton that the consumption of coal in the case of the patent still was about one-fifth the consumption of coal in the pot still, though some of the witnesses put the difference at considerably less than one-fifth.

513. That is very important?—That makes a very great difference. Then the labour required is very much less. The distiller stands *here*. He has all kinds of pipes brought down to him. There is a platform about *here*. This is sunk in a pit, as a rule, and various parts of the apparatus are *here*. It is all within reach of his hands, and he can test it and see whether there is too much heat or whether there is not enough heat, or whether the spirit is coming out at the right strength. It is all brought down within easy reach of the practical and skilled distiller, and the labour of a second or third-rate man—that is not the distiller, who is a man of very great importance—is very largely eliminated. You turn on the steam, you turn in the wash, and the thing goes on.

514. The result of that is that it is a cheaper process?—Very much cheaper.

515. And very much cheaper as to coal?—Yes.

516. In Scotland they use peat, do they not, too?—For the pot stills.

517. As compared with the Irish coal, which is the cheaper?—I do not know. I suppose that depends

upon the local conditions. If you have a peat bog near your distillery, I suppose peat is cheaper.

518. There is a good deal of light soil in the higher parts of Scotland and a good deal of barley which would scarcely pass muster in Burton-on-Trent, but is it a cheap barley that they use in Scotland?—I do not think so.

519. It is a good barley?—Yes, but I do not think it is cheap. The greater part of this distillation does not take place in the Highlands proper—what the man in the street would call the Highlands although it may be geographically the Highlands—it is the Elgin and Nairn district, but we should not call it the Highlands.

520. It is very good barley it is made from?—Yes, it is good barley. It is not the barley that grows up on the mountain side.

521. Now I want to go back to your definition. You want Irish and Scotch whiskey to be made in Ireland and Scotland?—Yes.

522. And you will not allow the word "whiskey" to be applied to all materials. You would not allow it to be applied to maize?—Whiskey—yes.

523. But "Irish" and "Scotch whiskey"?—No.

524. Supposing they did in Ireland use maize, why should you not then call it Irish whiskey?—It is not what the public expects and the public would not drink it. It never has been used.

525. It must be because in Ireland they have been accustomed to get something else?—Yes, and also maize is not grown in Ireland to any commercial extent.

526. But if it was, probably they would use it?—They have tried to grow it and have failed. It will not ripen in Ireland.

527. It could be sent over?—It could be sent over from America, and is sent over, but you cannot grow it with any success in Ireland. You can as an experiment, of course.

528. Now let me come to the second portion of your definition. You say that in order to constitute Irish and Scotch whiskey that compound must be made in a pot still?—Yes.

529. Where do you get that from?—I can give you the reference to the definitions in the evidence before the House of Commons Committee.

530. Let us have that one first?—Sir Algernon West, who was then chairman of the Board of Inland Revenue, practically gave that definition. I have had got out the material parts of that evidence, and I can hand them in.

531. Sir Lyon Playfair was the chairman of the Committee?—Yes. The Secretary has the report, and I can refer you to the numbers of the questions. If you look at question 11 you will see: "Is it the fact that the whiskies are chiefly made in pot stills?—Chiefly, but I will give the figures later on if you will allow me. Perhaps I may first give the two other divisions into which spirits may be divided. The second is that which is passed through the patent still." Then question 41: "Will you tell us what is your definition of whiskey?—There is, as you know well, no legal definition of whiskey, but broadly speaking it is made from malt or malt and grain, and is distilled in pot stills."

532. Then question 42: "That is what you usually accept as the definition of whiskey?—The term 'whiskey' is also applied to spirits distilled in the coffey or patent still. Spirits produced in patent stills, as I have already said, are distilled at very high strengths to 70 over proof, and of great purity." That is rather the contrary, is it not?—I think not. He said: "Broadly speaking it is distilled in pot stills," and then he says: "That is what we usually accept as the definition of whiskey, but the term 'whiskey' is also applied"—not by him I think, but by other people.

533. He is not the creator of terms. You must take the public terms?—But I think he means applied by the traders.

534. He was there as an official standing between the public and the trade?—But will you allow me to go on to No. 44. He is speaking there of the product of the patent still: "In fact, almost alcohol and water?—Yes. It is a silent spirit." Then if you look at question 185 on page 9: "Do you think the very name of whiskey has not come now to be applied generically so as to, I would not say, deceive, but to mislead?—Certainly."

535. But for what reason is that?—That has been the practice of the trade, I suggest.

536. Look at 181?—He is complaining of it being represented as being blended under the superintendence of Her Majesty's Inland Revenue when it had not been. Then at question 195 he is being asked about the materials apparently, and he says: "I will say potatoes or Indian corn"—that is maize—"if it was called whiskey at all I should think it unfair to the purchaser."

537. Your Bourbon whiskey would come under that?—It would. But he was probably dealing with English spirits, because that was a term of the reference to the Committee.

538. I am dealing with what he says: "If it was called whiskey at all I should think it unfair to the purchaser." Is the Bourbon whiskey a very inferior affair altogether?—It is very different in taste. It is very bitter.

539. And you would know it at once?—Oh, yes. I hope, if you will allow me, to put in some samples of Bourbon whiskey.

540. Have you any other references to Sir Algernon West's evidence?—No, not as regards definition. Then there was Mr. John Molyneux, who was Chief Inspector in the Excise. He held the position then that Mr. Tedder holds so well now. On page 21, answer 407 (this is rather perhaps going to another point of the wholesomeness), he says: "From the point of view of the trade is a glass of German spirit or a glass of silent spirit as wholesome as a glass of old malt whiskey?—I think it is not so wholesome in the general opinion, certainly."

541. We have not heard anything about German spirit?—I think you will.

542. Have you anything to say about it?—Yes, I should like to say something.

543. It would be convenient if you would say it now?—May I say shortly that German spirit we believe—I cannot say with any definiteness—is imported, and then is used for blending and mixing with whiskey and brandy and then is sold as Irish and Scotch whiskey and brandy. May I say that in the brandy prosecution, which also I had the privilege of conducting, this very patent still spirit made from grain was used for the adulteration of brandy. We had a conviction there, and that really led up to the whiskey prosecution. It was the first thing that called our attention to it, that this patent still spirit was used for mixing with brandy and producing a spurious brandy.

544. At present we have not proof of this German spirit, and you very properly say you are not certain about it?—No, but I hope I may be able to bring proof or suggest where proof can be obtained. I had to qualify it because I had not any proof myself.

545. Have you anything else to refer to in this Blue Book?—Yes, there is a definition, I think, at page 24, answer 466. This is still Mr. Molyneux's evidence. "Then in your view whiskey is a term which may be applied to a spirit made from molasses?—No, I think that whiskey, properly speaking, is made from malt or malt and grain mixed together, and distilled in a pot still." Really I do think you get that definition there stated plainly.

546. Certainly you get it there direct. You think that when the witness says "distilled in a pot still" he was putting it in contrast with patent still?—Yes, I think so. He had been talking of the patent still higher up. Question 409 rather indicates that, I think.

547. 467 does not make the distinction in the cost. It only makes the distinction in the material?—409 rather suggests it. I am sorry I have not a complete copy of the Blue Book, but only extracts, and I am a little diffident about it without having the full copy before me. He says at 409: "And whatever chemists may say the trade are prepared to pay a much larger price for a sound malt whiskey than they would give for what chemists tell you is a pure alcohol."

548. That is not a distinction of still?—But the pure alcohol comes from the patent still, you cannot get it from the pot still.

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549. I see what you mean?—I think that indicates what was in Mr. Molyneux's mind.

550. At 411 he is asked: "Then this whiskey, three and four times the price of the so-called pure alcohol, is liable to be adulterated with silent spirit and German spirit." What is the meaning of the terms "silent spirit" and "neutral spirit"?—As I understand it, the silent spirit is called by that name because it does not tell you what it is made from. If you have whiskey or brandy or rum made, as we say it ought to be made, anyone who has the least knowledge on tasting it would know what it would be made from, but if you taste pure patent still spirit only the most expert of experts could tell what materials it had come from. Neutral spirit is called so because it is neutral. There is nothing to distinguish it from any other kind of pure spirit.

551. If you eliminate the bye-products?—If you eliminate the bye-products you come down to the common denominator of all spirits.

552. That is pure alcohol?—It is not really pure alcohol, but practically pure.

553. Have you anything more to say with regard to these definitions?—Will you allow me to call attention to question 469, because it rather bears out what I said, that this blending or the sale of patent still spirit as whiskey was a modern idea. The question is: "That is amongst the distillers?—Yes, and merchants. It is a thing of comparatively modern growth, this blending." Then there is another definition of Sir James Bell, the Principal of the Inland Revenue Laboratory, a very distinguished man, if I may say so of him. At question 840 he says: "Under the head of pot still spirit I include whiskey, brandy, rum, and Geneva or Hollands." I do not think that is very strong. Then at 850 he says: "We are inclined to the opinion that the higher alcohols remain practically unaffected"—that would be, I think, in the pot still. Then at 889: "Now about the patent still or silent spirit, have you made experiments with that?" Then in my copy some few lines down in the answer he says: "The result of the test was a negative one in nearly every instance, and the spirit was found to be practically odourless." There is a great deal there that is interesting, but I do not want to weary you by reading it. Then Mr. Cobden Samuel, who was the Analyst Principal of the Customs Laboratory at page 57, question 1316, is asked about the term "British plain spirit." "Does it not confound together pot still whiskey made from grain, and rectified spirits made by patent stills?—It does; it includes the two, which, in my opinion, are entirely distinct things."

554. What includes the two?—The term "British plain spirit." That is the term that the Excise and the Customs use.

555. What is British plain spirit applied to?—I think Mr. Tedder said yesterday it was applied to every kind of spirit manufactured in Great Britain and Ireland.

556. This criticism simply is that one term is applied to two classes of production?—Entirely distinct things. He says that pot still whiskey made from grain and rectified spirits made by patent stills includes the two, which are entirely distinct things.

557. That is very material. At 1317 he is asked: "They are distinct articles?" and he says "They are distinct articles."?—May I say this without troubling you with references, unless you wish it, that Mr. Samuel describes some very interesting experiments.

558. Who was Mr. Samuel?—The Analyst Principal of the Customs Laboratory. All these gentlemen whose evidence I have referred to were officials. I have eliminated the trade witnesses who might have an interest in giving their definitions. I have taken gentlemen who had an official position quite unconnected with the trade. Mr. Samuel describes some interesting experiments he made on himself. He first of all drank the strongest pot still whiskey he could get—fusel oil, I think—and he found no ill-effects. Then he drank some patent still spirit over a number of days, and he says that headache supervened and tightness across the chest. Then he tried the experiment on his assistant to see if there were any idiosyncracies on his part, and the assistant became so ill that he had to discontinue the experiment in about a week.

559. Perhaps that would deter you from producing the samples?—I am not going to drink them myself. Then he drank a fairly large quantity.

560. Was there evidence given on both sides—contradictory evidence to this view?—Oh, yes, I think so. I am afraid I picked out naturally the parts that assisted me rather than the parts that did not.

561. What was the finding of the Committee upon it?—The finding of the Committee was perfectly colourless on this point.

562. Did they refer to it?—Yes, they did, and I can give you the references. You will find they refer to it at page 4 of the Report in the 2nd Volume.

563. This is the Report of the Committee of 1891: "There is no exact legal definition of spirits going by popular names, such as whiskey, brandy, rum, patent or silent spirits. Some witnesses desired to define whiskey as the spirit made in pot stills, and would deny that name to spirits made in patent stills, even though the proportions of malt and grain used in the production might be the same in both. Some of the distillers from malt desired that their whiskey should be called 'malt whiskey,' though the general name 'whiskey' might be extended to those who mix malt with grain. On the other hand, certain distillers in Belfast and Scotland urged that spirits distilled in patent stills from malt and grain were entitled to be considered as whiskey, that they are used sometimes as such directly, and are now largely employed in blending pot still whiskey"?—They do not lay down any definition. You see they say: "Your Committee do not attempt a legal definition of whiskey. They would refer to the evidence of Dr. Pavy for a general and useful definition of spirits of various kinds, but this is too general for a legal definition."

564. Have you Dr. Pavy's evidence?—Yes, I am going to call your lordship's attention to it, if I may?

565. I should like to see that?—Your lordship knows on this Committee there were representatives of the trades, which I am happy to say is not the case on this Commission. Therefore, you either have to have a minority report, or you would fail to get a report at all, and they seem to have chosen the safer plan of adopting a more or less colourless report to which all members of the Committee could adhere. For instance, there was a distiller on this Committee. Naturally, that would have some effect on the report. Dr. Pavy gives evidence in the second volume. There is rather a good diagram of Dr. Pavy's put in. He begins on page 105, question 3693. Would your lordship look at answer 3700?

566. Who is Dr. Pavy?—He is a doctor of medicine. I do not think he was an official.

567. He has written well-known works on food and diatetics, I think?—Yes. Question 3700: "What would you consider that potable spirits generally may be regarded as consisting of?—As consisting of plain spirit or ethylic alcohol, with flavouring principles constituting the bye-products." Then question 3702: "And that the bye-products which exist by different materials and processes of distillation, give peculiar character to the different spirits?—They give the characteristic qualities to the spirit." At question 3706: "And with regard to the method of distillation, which varies in the case of whiskeys from pot still to patent still, do you think that the method of distillation also affects the bye-products?—It will affect the character of the spirit which is obtained from distillation. That is, in one form of distillation, represented on the left"—he is referring to a diagram. Whether it is algebraic or not I do not know. If your lordship looks at the diagram, on the left hand side is the pot still. That has E plus X representing ethyl alcohols plus bye-products. Then on the right hand side is the patent still in which the bye-products and ethyl alcohol are separated.

568. This is rough, very rough?—Yes; it is diagrammatic only. He is referring to that. Then he says, "That is, in one form of distillation, represented on the left in that sketch on the diagram which is hanging on the wall, the plain spirit, or ethylic alcohol, will come over mixed with the bye-products; but in the other process of distillation a separation is effected, and you get the ethylic alcohol or plain spirit running in one direction and the bye-products

—which give rise to fusel oil—in the other direction. That is to say that, in pot still spirits, the bye-products remain all through without separation?—They remain with the ethylic alcohol; the two go together. But in the case of the patent still spirits they are separated to a large extent, and do not accompany the spirit afterwards?—That is so." Then, 3725: "Now, would you give us a definition of the potable spirit known as whiskey?—I would define whiskey to be a spirit consisting of plain spirit or ethylic alcohol, mixed with the bye-products derived from malt." Then he qualifies that, I think, a little in the next question.

569. "I would define whiskey to be a spirit consisting of plain spirit." Does that mean after it has been passed through the process at all?—*This* process? (*Referring to the patent still.*)

570. Yes?—No.

571. What does plain spirit mean? — He means ethylic alcohol. He says so.

572. (*Dr. Horace T. Brown.*) Pure alcohol?—Pure alcohol.

573. (*Chairman.*) That is obtained by passing it through a process?—If you pass it through the patent still you eliminate the bye-products.

574. I want to get what plain spirit means. Plain spirit is alcohol produced by passing through this process?—Alcohol produced by passing through the patent still.

575. Would it if passed through the pot still?—Yes; you get the plain spirit—the ethylic alcohol—there.

576. Why do you say you do not get the plain spirit from the patent process?—You do get it. I misunderstood the question. I thought you meant that in this definition he meant plain spirit, which had, as a matter of fact, been passed through the patent still?

577. Yes. I do not quite see why you should assert he does not mean it?—I think if you read the whole of his evidence you will find he is distinguishing between the two. He says: "I would define whiskey to be a spirit consisting of plain spirit or ethylic alcohol, mixed with the bye-products derived from malt." He does not mean that if you have eliminated them in the patent still you are then going to mix them up again mechanically. It would be an extraordinary liquor if you did.

578. It must mean the bye-products?—Yes; it has been tried to make an artificial whiskey by, after passing through this patent still, getting the plain spirit and putting the bye-products in again, and you get a most awful concoction.

579. I quite see the difference?—He a little qualifies that in 3726.

580. Will you just read that?—"I should say in the case of pure malt whiskey only the bye-products derived from malt; but if you use the word 'whiskey' without saying 'malt whiskey,' I would say the bye-products coming from both malt and raw corn."

581. What does he include in raw corn, do you think?—I think he includes barley and wheat and oats.

582. Maize?—No; I think not.

583. Bran — why not? — You asked me what he meant.

584. So far as it is put down here?—I think so far he had not been dealing with maize. I admit it is a little indefinite expression.

585. (*Dr. Adeney.*) You do not think he means unmalted grain?—I think he means unmalted corn. Raw corn means unmalted in this sense as distinguished from malted corn.

(*Dr. Horace T. Brown.*) It is a well-known definition; raw corn means unmalted corn.

586. (*Chairman.*) What would it include?—It would include all cereals, unless specified.

587. Why would it not include Indian corn?—If you take it literally, it does.

588. (*Dr. Horace T. Brown.*) In the United States, when you speak about corn you mean Indian corn?—The answer to that would be that if you include Indian corn in a pot still you would certainly not produce Irish or Scotch whiskey. You would produce something with a totally different flavour. If you were to use Indian corn in a pot still you would not eliminate these secondary products. You would produce something which no one would think was Scotch or Irish whiskey.

589. He does not mention pot still there?—No; he does not there. He is defining there the materials.

590. (*Mr. Guillemard.*) The inference is against it, is it not, in view of his reference to unmalted grain?—Against pot still?

591. Against his wishing to limit it to pot still only. I do not want to take it too far. You would not admit that?—I should not admit that, I think, taking the general tenor of his evidence. If you take those words by themselves, I think it would be open to that consideration.

592. I do not want to press it?—He has been talking before about the pot still.

593. (*Chairman.*) Just to solve this question, just read 3730: "Would you consider that patent still spirits deserve the name of whiskey?—Patent still spirit, if you look upon it as whiskey, stands in the position of the play of 'Hamlet' without the character of Hamlet in it; that is to say, it has nothing of the character of whiskey about it. Nothing as regards the flavour or the taste, or the qualities which make these other spirits potable?—No. It does not contain the bye-products which give character."?—I think I am right in saying that if you take it in connection with that it is clear what he meant.

594. Then I will read 3732?—I was going to ask you to be good enough to do that.

595. "You are aware probably that the patent still spirit made from whiskey and grain, according to the evidence before us, contains, though not a large quantity, a small quantity of bye-products?—The amount is so small that persons are not able to distinguish it. I have been carefully through the minutes of evidence, and I glean from the evidence which has been given that there has been no person yet before you who has said that when the spirit is perfectly clean he could distinguish the spirit coming from one source or from another. The witness has said that he thought an expert might do it. If it is not characterless it is almost characterless." At 3734: "That is the case, is it not, with regard to plain spirits, whether they are got from malt or from malt and grain, or from molasses, or from potatoes, or from any other source?—Yes, it does not signify from what source the plain spirit is obtained; if it is perfectly clean it is simply ethylic alcohol, without any character beyond that belonging to ethylic alcohol." According to 3,735 it all seems to depend on the bye-products: "Bye-products give the flavour and the odour, and make the spirit, instead of being insipid, relishable"?—Makes it palatable instead of being insipid.

596. That is what is meant, I think?—I do not think I need trouble you with any further extracts. I think they support me in some way at any rate. May I mention this while I think of it. At the trial—I only mention it as a fact—there were some very distinguished men who were called as witnesses for the defence, and who said that patent spirit might be whiskey. We gave them two samples without any labels on them, one of patent spirit bought from a patent still distillery, and the other of pure alcohol bought from a chemist, and we asked them which was which and they nearly all said, if not all, that the chemist's spirit—rectified pure alcohol—was patent still spirit. They fixed on the wrong one. They could not tell the difference. I do not mean to say that they were expert tasters, but Professor Sir James Dewar was one, I think.

597. I do not know whether there is anything more you wish to say in support of your claim, as I call it, that all whiskey shall be pot still whiskey before it is called Scotch or Irish whiskey?—No, I think not.

598. One or two questions more. Did you from your enquiries find whether the retail sellers of the whiskey did make a material difference in price on account of the difference in the wholesale price, or do you think they took advantage of getting the cheaper whiskey to sell?—Do you mean the retailers like public-house retailers?

599. Yes, and like off-licensees?—I do not think they knew.

600. Do you think they took advantage of the lower price of the patent still to sell it equally with

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pot still at the same price?—Yes, I think so. I must say in justice to Mr. Wells and Mr. Davidge that I do not think they had any conception of what it was they were buying.

601. But they knew the price they were paying?—They knew, in fact I think it was Mr. Wells said it was the cheapest whiskey he had ever bought.

602. Yes, he did, that is the 10s. 4d?—That is the danger, if I may say so, that these things are produced at a very cheap rate, and then travellers go round to public-houses and to the off-license people and they persuade them to buy these things under the name of Scotch whiskey and Irish whiskey because they are cheap, and then they are retailed by these people who very likely have no idea of how they are produced or what the proportions are, or anything of the kind, and they are retailed as Scotch and Irish whiskey.

603. Did any question arise during the litigation on the point of whether it would be injurious to any seller to have to make a detailed mark more than he does give now upon the whiskey he sells?—Does your Lordship mean the retail seller?

604. I mean the licensed victualler or grocer?—No, I do not think there was any suggestion that that would hurt them very much except that it was thought that people would be frightened by the name "patent still spirit"; they would think there was something different from what they had been accustomed to get. I do not think the retailer would mind "Scotch whiskey compounded of 90 per cent. of patent still spirit and 10 per cent. pot." I do not think he would very much object to that. If you might call it in large letters "Scotch Whiskey" I do not think the retailer would very much object to having on the label what the proportions of the spirit were.

605. Were there any suggestions made in the course of the litigation as to what was a practical label that could be used?—Not on behalf of the retailers. The defence was taken up entirely by the great Scotch company, the Distillers Company, Limited, and really—I do not say it at all offensively—it was fought rather from their point of view than that of the retailer. Before Mr. Fordham, speaking from memory—it is nearly three years ago now—I think there was a very strong objection to having anything on the label of the kind, but when we got to Quarter Sessions the view seems to have changed, and if I may summarise it, the view seemed to be that if they might call it Scotch whiskey or Irish whiskey they would have no objection to stating on the label that it was a blend of pot still and patent still, but they objected very strongly to giving the proportions. From our point of view if you do not give the proportions in a case where you have 90 or even 95 per cent. of patent still spirit the label really is very little protection to the purchaser.

606. You have just brought me back to what I was first asking you about. I want to ask you about this blending. Is it your view that there is any permissible blend between the pot still and the patent still which would entitle the seller still to term it a real Scotch or Irish whiskey?—I should think I should go so far as to say no, there is not.

607. Then you mean to say that if 10 per cent. of patent still were put in you would not allow that?—It would be getting rather small then.

608. I am taking it by degrees?—Practically small. If you start with the assumption that patent still spirit is not whiskey then if you add anything to whiskey you are adulterating. It is just as if you added 10 per cent. of water to milk. Although this was a very common practice before 1875 it is an undoubted offence now.

609. I see the difficulty. There is a very great difference between the two. Water is not milk, and milk is not water, in any shape or form. I do not know exactly what we can call our X number, but supposing it is a small number, take 15 or 20 per cent., and you blend that, that is putting the patent still into the 85 per cent. of the pot still, what would you ask should be put upon the bottle then?—I should ask that it should be stated: "This is a mixture"—I prefer the word "mixture," and if I may I will show your Lordship why presently—"of 85 per cent. pot still whiskey and 15 per cent. of patent still spirit." Our whole contention has been based upon the provisions of the Sale of Food and Drugs Act, that the purchaser is entitled to know what it is he is buying.

610. There are different degrees of information. Suppose you said "This is a blended whiskey," would that do for you or not?—No, I think not. I do not think the public would know what that meant.

611. Are you quite sure that the public would know what is meant by pot still and patent still?—They do now.

612. People in this room do, but there are a good many people in the world that do not, I should think, who drink whiskey?—A great many, no doubt—I think a smaller number now than there used to be. I forget your Lordship's question, I am afraid.

613. I was asking you first if you had got 85 per cent. of pot still and 15 per cent. of patent still, what label would you wish to have put on?—I should like to have on this, "Scotch Whiskey" or "Irish Whiskey," as the case may be, "mixed with 15 per cent. of patent still spirit."

614. There would be a little difficulty about that if you tried to make them put it on according to the truth, because the retail seller must depend upon somebody for the information. He would not know?—If he had a warranty he would be discharged under the Sale of Food and Drugs Act. The invoice is a warranty.

615. You suggest that there should be a warranty from the wholesale seller or distiller to the retail seller, and that then he should follow his warranty?—Yes, and the invoice he gets with the goods is a warranty under the Act. For instance, there is a warranty here. These two men, Wells and Davidge, if they had chosen, could have got off.

616. What is the provision in the Food and Drugs Act about warranty?—That where the goods have been supplied to the retailer, or to the person from whom the inspector has purchased the goods with a warranty, and the retailer, the defendant, gives notice so many days before the hearing that he relies on the warranty, and sends a copy of it, and if he proves that he has not altered the goods since they reached his place, and had no reason to think the warranty was otherwise than genuine, he is discharged.

617. That is a defence in the milk prosecution very often?—In milk very constantly, and in many others too. As I say in these cases the two defendants could have been discharged if they liked.

618. Had they warranties?—They had invoices, which amount to a warranty.

619. They put nothing upon the bottle?—The label on the bottle comes under the Merchandise Marks Act.

620. There was no representation made at all by Wells and Davidge?—Yes—"Fine Old Scotch Whiskey."

621. In the one, not in the other?—Not in the other, no.

622. I do not understand that the policy of your prosecution is so much to prevent the sale of these things?—I do not think we can go so far as to prohibit either the sale or the consumption.

623. On what ground could you possibly prohibit either the sale or the consumption?—I do not think I could.

624. It is not injurious to health?—Not sufficiently. If a man knows that he is getting this and chooses to buy it, unless you are going to have a prohibition law like the Maine Law, I do not see how you are going to prohibit it.

625. You reduce your case to notice to the purchaser?—Yes, so far as the Council are concerned. I do not know what other people may say.

626. I am asking you about your prosecution?—I really cannot see that there would be any justifiable ground for prohibiting the sale or the consumption of patent still spirit unless you are going to prohibit all alcohol, which is out of the question. One has, if one may say so, to apply a little reason to this.

627. What are the principal reasons why you think the customer ought to know exactly what he is purchasing?—Take first of all perhaps the most im-

portant thing. A doctor says, in the case of illness—typhoid, or pneumonia, or any fever—"You must give this patient some whiskey, take care it is genuine whiskey," and the man, in the case of poor people, goes round to the nearest public-house, and, if we are right, he gets this kind of stuff that has no effect at all. If the doctor tells him "See that you get pot still whiskey," and he gets a label "This is 90 per cent. of patent still," he would probably not buy it, he would go somewhere else. Then as regards the question of price, that perhaps is not very important, but it is important. A man is getting a much cheaper article at very much the price of the higher and better article.

628. I should think the great majority of persons who buy this whiskey would know whether patent still or pot still was the dearer of the two?—They are getting what they think is genuine whiskey, and they are paying for it almost as much, if not quite as much, as if they were getting it, and getting a thing which cost in Davidge's case 10½d. a gallon.

(Adjourned for a short time.)

629. (*Chairman.*) Mr. Bramall, I got from you your definition of Irish whiskey, but I think, unintentionally, we must have passed off without getting a similar definition as to Scotch whiskey. Will you give that, please?—It was my fault, I think. Scotch whiskey we define as spirit distilled in a pot still in Scotland from malted barley.

630. Where do you think the definition comes from?—I think it is indicated rather in some of those passages to which I called your Lordship's attention. It is difficult to get an authoritative source for it; but it is from inquiries in Scotland as to what was the practice in pot stills. Practically no pot still in Scotland uses anything but malted barley. If you have the pot still you have the malted barley.

631. It is material to know: do you get that definition before or after the patent still product came on the market: do you trace it to anything earlier than, say, 1891?—I am afraid I cannot say for certain. I will look that up, if I may, to see if I can find anything earlier. It rests partly on evidence. I think evidence will be called before the Commission.

632. There is one matter I have not put, that is: In the use of the pot still is it necessary, in order to produce a satisfactory product, that the materials used should be the best?—Absolutely the best.

633. Why is that?—Because the pot still would reproduce the inferior flavour of the inferior material. If inferior material were used, the characteristics of the inferior material would be reproduced in the final spirit distilled.

634. That, of course, I suppose, is one of the reasons why the cost of the pot still is higher than that of the patent?—Yes; that is one reason.

635. Suppose they used the inferior article in the pot still system, what would be the result?—You would get an inferior taste in the spirit.

636. I understood that if inferior ingredients were used the pot still would produce singularly objectionable products?—If they were really bad. Supposing you had third-class barley, you would get the third-class spirit from it—not necessarily objectionable. If you used bad material you would get undrinkable things.

637. What I had in my mind for some reason was that the pot still showed the effect of bad material more than the patent still?—Much more.

638. As regards the marks to be put on any when sold, you have one company that did for a time put a mark on?—They advertised it. They did not put a mark on the bottle. It was the Distillers' Company, Limited, which practically is a combination of a very large number of patent still distilleries in Scotland. I think there is only one patent still distillery in Scotland outside their combination. They advertised, before the commencement of these proceedings, in the trade journal, "The Wine and Spirit Trade Record," for a number of months, at any rate—I have copies for a number of months—"The Distillers' Company, Limited. Distillers of Patent Still Grain Spirit at Port Dundas." Then it gives a list of the patent still distilleries and where they are. "Also Irish Grain Spirits at Phœnix Park Distillery, Dublin. Distillers of Scotch Pot Still Whiskey at Caledonian, Edinburgh," and so on. Then "Distillers of 'Glen Forth' Pure Scotch Malt Whiskey at Kirkliston Distillery, West Lothian. Distillers of Finest Highland Malt Whiskey at Knockdhu Distillery. Distillers of Finest Dublin Pot Still Whiskey at Phœnix Park Distillery, Dublin." They do not use the word "whiskey" in connection with the grain spirit. May I put that in?

639. Yes, I shall want that in. Would you mind just reading that over again?—I will read it entirely, if I may.

640. Just what you read—the material part?—"The Distillers' Company, Limited. Distillers of Patent Still Grain Spirit at"—seven places mentioned, including Cambus—your lordship mentioned Cambus yesterday. "Also Irish Grain Spirits at Phœnix Park Distillery, Dublin."

641. (*Mr. Guillemard.*) Grain spirits?—Patent still grain spirits. Then there is a line drawn, and "Distillers of Scotch Pot Still Whiskey at"—two places mentioned. "Distillers of 'Glen Forth' pure Scotch Malt Whiskey at Kirkliston Distillery. Distillers of Finest Highland Malt Whiskey at Knockdhu Distillery, Banffshire. Distillers of Finest Dublin Pot Still Whiskey at Phœnix Park Distillery, Dublin."

642. (*Chairman.*) In two you have read out it does not state pot still. It only says "Pure Scotch Whiskey"?—It says either pot still or malt.

643. What do you gather from the use of the word "malt" without "pot still"?—It must be a pot still. It would be silly to put malt in a patent still. It is the most expensive material. If you put it through a patent still you would destroy the advantage of having the malt.

644. It seems to be contrasted there by putting pot still in one line and not in another?—This is to the trade, remember—not the public. I do not know that you can get this outside the trade. It is difficult to get, at any rate. Any man in the trade would know that malt whiskey must be a pot still whiskey. I should perhaps correct that. There was one distillery in the Lowlands where they used malt in a patent still, but no one could quite find out why.

645. I suppose I cannot get exact proportions from you, but, first taking Scotland, which exists in the greatest proportion, according to you, the pot still or the patent still production?—I think it is very difficult to say. You can only get those figures, I think, from the gentlemen from the Excise.

646. We had some figures yesterday; but, of course, the pot still when made may be sent for blending with the patent still?—Yes, largely in Scotland.

647. And the patent still distilleries are very large, are they not?—Very large.

648. Larger than the pot?—Very much larger, on the average.

649. That refers to Scotland, but not to Ireland?—There are very few patent still distilleries in Ireland. I think the number was given. There is one in Dublin, and the rest, I think, are all in the North of Ireland.

650. (*Chairman.*) We had it from Mr. Tedder.

651. (*Mr. Guillemard.*) They are small, anyhow?—Quite small, and two of them, at any rate, belong to the Distillers' Company. They introduced them there. One I know in Dublin. They have one in Dublin—it must be two in Dublin. They told me when I was there that they were really making yeast, and they were only using the patent still spirit as a bye-product.

652. (*Chairman.*) There was some list you referred to?—May I put that advertisement in?

652*a*. Yes?—There is a mark in the place. (*The document was handed in.*) There are two things I might mention. One thing that influenced us at one time was this, that there is a trade list circulated among the trade—(I do not know that I need mention the name, because I got this more or less privately)—I will not mention the name, but it is a well-known firm who circularise the trade very largely—"Essences and Oils for Liqueurs. Wines, Spirits, &c.: Concentrated Quality: Unrivalled for strength and trueness

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of flavour, and suitable for improving the flavour of cheap wines, &c." Then there are a number of essences given, occupying a page and a half. Every kind imaginable almost of spirits and wine; and amongst others "Whiskey, Irish," where the essence is 15s. a lb. "Whiskey, Scotch," 15s. a lb." Then I might mention that there is "Brandy" here. I think they make cognac out of this stuff—Yes, cognac also is made out of this essence.

653. What is the point of this?—To show—I do not want to use too strong a word—the way in which spurious whiskey is made. You get the patent still spirit, and you buy these essences and you make Scotch or Irish whiskey by putting these essences in.

654. What is the essence that makes whiskey?—I do not know. That is a trade secret, I imagine. I have not been able to learn that. Then they have another list here on the next page with a book of recipes. It is difficult to get. It shows the practice, that must be a very wide practice, of concocting the spirit and calling it whiskey. I do not know whether you would like that put in.

(*Chairman.*) Yes. (*The same was put in.*)

655. (*Dr. Horace T. Brown.*) What is the date?—It is September, 1905.

656. (*Chairman.*) It will appear in the shorthand notes. It is quite sufficient if you give the reference to it?—September, 1905.

657. (*Chairman.*) That is all I have to ask you?—Might I mention one thing, my Lord—that a good deal goes on in bonded warehouses under the eyes of the Excise officers which I think I may say they very much object to, but which they are powerless under the present law and regulations to prevent. At any rate, under the present regulations there is a great deal of concoction, as I say, of spurious spirit which takes place in bond. There was one case as to which I have a letter here.

658. Generally first, what do you say takes place?—There is a great deal that perfectly honestly takes place; but the case I can mention, and I can submit the names if your Lordship would direct them to be summoned, is of patent still spirit sent into a bonded warehouse; half put in one set of casks and labelled "Scotch Whiskey"; and the other half put in another set of casks and labelled "Irish Whiskey," the same spirit, and sometimes not coming from either Scotland or Ireland, but from England.

659. What is the object of putting half Scotch and Irish?—They want to sell part as Scotch and part as Irish.

660. For the market?—Yes, for the market. What comes in from a neutral source—the very same thing—goes out partly as Scotch and partly as Irish. Then spirits which are of little age are bottled and described as of very much greater age, and sent out. There is a very great deal that the Excise officers see under their eyes, and are powerless at the present moment to prevent—a great deal of what amounts to fraud.

661. If your suggestion were carried out that there should be a distinctive mark declaring what the article sold was, at what stage of its existence would you suggest that that should be enforced?—I think it would have to be from first to last. It is now put on the cask very largely—at any rate, the date is, and other particulars. When it gets into the bottle the distinctive mark that was on the cask ceases to exist; it does not follow the spirit into the bottle. I suggest that where it is bottled in bond, and sometimes you see the label "bottled in bond," which is some kind of guarantee, a very different age from the age on the cask may be put on.

662. You want this, wherever you can, I suppose, when it is taking its course from the distillery to the actual consumer who drinks it; it needs to be marked wherever it can be marked?—Yes.

663. (*Mr. Guillemard.*) Perhaps I might ask you a question with reference to that last instance you gave of the spirit that went out partly as Scotch and partly as Irish. Do you happen to know whether that was in a Customs or an Excise warehouse?—I imagine it was in the Excise.

664. Do you happen to know whether it was brought to the knowledge of the Excise officially—whether it was reported to Somerset House?—I do not know that.

665. I am only asking in the interests of the Excise because it might be reported. I do not say what would be done or what would not, but it might be reported?—I understand some things have been reported, and, if I might venture to say so, there was at one time some consideration as to whether the Excise and the Customs could not take action.

666. Yes, frequent consideration?—I think that was an Excise case. It went from one part of England to Scotland, therefore, I suppose that would be Excise.

667. It is not a case you are in a position to hand in yourself?—I should not like to do it, but I will get a statement if you will allow me.

668. I did not mean to the Commission, I meant to Somerset House. That is just as you feel about it?—I should be only too pleased to do it, but one must keep faith with the people who tell you these things. I cannot do it without their consent.

669. I quite understand that. There was a point about your definition I should like to ask you. First of all as regards your definition of whiskey, I understand you would exclude from the definition of whiskey any spirit that was wholly produced in a patent still?—Yes.

670. That is clear. You would also exclude from the definition of whiskey spirit that was partly composed of spirit produced in a patent still?—Yes—if I may say—from the term whiskey pure and simple without qualification.

671. Then the term whiskey pure and simple you would wish to confine to whiskey produced in a pot still absolutely unmixed with any other form of spirit?—Yes.

672. Have you any idea what proportion of such spirit, that is to say undiluted pot still spirit, bears to the total produce of whiskey that goes into consumption?—In Ireland a very large proportion.

673. I mean generally rather?—In Scotland I could not possibly say. I should think in Scotland less than half. In Ireland nine-tenths.

674. Would you think on the whole less than half—a good deal less than half?—In Scotland?

675. Taking the country as a whole?—I could not say offhand. One would have to compare the figures from Ireland and Scotland. In Ireland I am quite sure a very large proportion is pot still undoubtedly; in fact I think all the known brands of Irish whiskey, with the exception of one or two in the north of Ireland, are undoubtedly pot still whiskey.

676. Pure?—Yes.

677. Would you come to your definition of Scotch and Irish whiskey. Take Scotch whiskey for instance. You would exclude from the definition of Scotch whiskey any spirit that was composed of pure patent still even if made in Scotland?—Do you mean altogether composed or partly?

678. Altogether composed. You would exclude that from the definition of Scotch whiskey?—Yes.

679. But would you exclude from the definition of Scotch whiskey any blend of patent still whiskey and pot still whiskey both made in Scotland?—Yes, from an unqualified definition. I think a label could easily be devised to meet the case.

680. But I want to carry it a step further. You would put on the mixture something to show that it was a mixture?—Yes.

681. I understand you to suggest that you actually would put on the label "a blend of so much per cent. of pot and so much per cent. of patent"?—Yes. It is not only in connection with this case. I have had a very large experience in connection with that under the Merchandise Marks Act and one has seen the evil of it. You have a label, we will say "Tarragona Port"—I had several cases of that—where the chief constituent was grape must from Greece. The grape must is the unfermented juice of the grape. It is brought over here unfermented in hermetically sealed vessels, so that it escapes the duty on fermented alcohol. Then it is fermented here in England. This was grape must from Greece (of course the Greek grapes are very small), and then a smaller proportion of Tarragona port was added to it. It was held protected by a label "Tarragona port mixed with the pure juice of the grape," or something of that kind, although the Tarragona that was added was the smaller proportion. I thought it ought to have

been described as grape must with the addition of Tarragona port. That would be the correct description, but that would not have sold of course.

682. Still, to come back to the actual whiskey, your suggested label would, I take it, specify the proportions of pot to the proportions of patent?—Yes.

683. To be any good from your point of view it must do that, I think?—Yes, in some shape or way it must.

684. I see you say in the statement you have handed in that an analyst can tell pot still spirit from patent still spirit?—Yes.

685. Of course I see clearly that an analyst could tell pure pot still spirit quite easily, and he could tell the pure patent spirit quite easily, but now if you got a blend and gave it to your analyst—I have no chemical knowledge myself—could any analyst say that the proportions described on a label were right or wrong?—Approximately, yes, I think so. It would have to be approximate.

686. I am only suggesting—would it be a close approximation at all?—Fairly close.

687. I gather from the 1890-1891 evidence that there would be a great deal of difficulty about it?—I think science has made some advances since 1891.

688. That is so, of course?—Of course the way the analyst would do it would be this. He would find what is called the co-efficient of impurities and he would be guided by the quantity reached.

689. The quantity of the co-efficient varies a good deal?—Yes. Then he would take each particular substance and see the amount of that, and taking his standard of pot still and his standard of patent still it would be a rule of three sum as to the proportions of either.

690. Then your view is that an analyst could satisfactorily test the proportions stated on the label?—Yes, approximately, and I think the public analysts always make allowance for variation, for error in giving a certificate. They take the lower figure in favour of the person from whose sample it has been taken.

691. There is one point I wanted to put to you. I think in your evidence you spoke of brandy as being accepted as meaning a spirit made from the grape?—Yes.

692. What do you rest that on?—That was the decision in the brandy case.

693. Mr. Fordham's decision?—Mr. Fordham's decision. Will you forgive me for saying that was the contention of the defendants? What they said there was: You cannot prove that this has not come from the grape. It is patent still spirit, and therefore it is silent as to its origin.

694. I want to take you a little beyond the point of contention in that case. With regard to the meaning of the word "brandy," as used in the Statutes of this country, has it been brought to your notice that the word brandy is used on the Statute book with reference to a spirit made from grain?—No.

695. I would call your attention to the 148th section of the Spirits Act, 1860, which is as follows: "All spirits which shall have had any flavour communicated thereto, and all liquors whatsoever which shall be mixed or mingled with any such spirits shall be deemed a British compound called British brandy." I admit that is called British brandy, and not brandy, but for what it is worth, that is that reference. It is a rather interesting subject, and there is a further point?—Is that the Act of 1880 or 1860?

696. The Spirits Act 1860, section 148. There is one very curious point. If you go back to 1690, which is getting venerable, the Act of 2 William and Mary, section 2, chapter 9, is entitled "An Act for the encouraging of the distilling of brandy and spirits from corn," and the preamble runs like this: "Whereas good and wholesome brandies aqua vitae and spirits may be made from malted corn"?—I should call that whiskey.

697. I was only quoting *à propos* of Mr. Fordham's judgment what I have not seen brought out, that if you go back 200 years you will find a statutory authority for brandy as meaning a spirit made from corn?—Latterly it would be impossible to call that brandy, taking the derivative meaning of the word brandy. You remember that, of course. I do not think anybody would contend now that you would make brandy from grain spirit.

698. You do not think anybody would?—No; they would not contend it in public.

699. (*Dr. Cushny.*) I should just like to ask you one or two questions with regard to the medical aspect of the question. I understand your view is that the pot still whiskey is less injurious to health than the patent still or pure alcohol?—Yes. Of course, you will understand I do not speak from any personal knowledge of my own on that, and it is merely what medical gentlemen have told me. I am not a medical man, and I should not like to discuss the medical question with medical men.

700. I just want to bring it forward, in order that it should not be published immediately that there was not some discussion about it, because you are aware that alcohol is used very largely in the place of whiskey or brandy in medicine?—In some cases, yes.

701. As an absolute substitute for it. In some hospitals you find pure alcohol used, where in other hospitals they would use brandy or whiskey. Now that is so?—I take it you would give whiskey in certain specific ailments.

702. No; there is no disease which one would treat with whiskey that in other countries, or in other parts of the world, they would not treat with pure alcohol with equally good effects?—You will forgive me for not venturing to discuss that with a doctor.

(*Dr. Cushny.*) Yes I just wanted to bring that out.

703. (*Dr. Horace T. Brown.*) I want, first of all, to raise a question similar somewhat to that of Dr. Cushny's. I gather, from what I have seen and heard, that there has been no serious attempt on the part of the prosecution to allege that the patent still product is in any way deleterious to health?—Not in a small quantity. Unless you take an excessive quantity. I think that would be so.

704. Did not Mr. Bousfield put that very clearly in his opening in the appeal case, where he said there was no objection to it—that is the patent spirit—on the ground of unwholesomeness?—Yes; I think he did.

705. You accept that?—No, I do not think I do. I did not like it when he said it. I think he ran away from his brief a little bit. I should put it very slightly the other way. I do not suggest it is poisonous, or anything of that kind, except in so far as all alcohol is.

706. I suppose you have some evidence to bring forward on this question?—Certainly.

707. On the question of the unwholesomeness, if there is any evidence to bring forward, and also on the medical question?—Yes.

708. On the dietetic value?—I have only tried to summarise the information of the kind of evidence on that point. I have not ventured to put it forward on any knowledge of mine.

709. You have referred, in your written statement, to the large margin of retail profit made by Mr. Wells, I think it was?—Yes.

710. One of the defendants in the recent whiskey prosecution. You have given a number of details to substantiate your statement. The inference, I imagine, which is to be drawn from that statement is that there was a larger margin of profit due to the fact that the greater part of the whiskey consisted of patent still spirit, which could be bought, duty free, at 1s. 3d. a gallon; whereas the pot still whiskey, on your lowest estimate, would cost about 3s. 6d. per gallon?—Yes.

711. He could buy it at 3s. 6d.?—Yes.

712. Duty free at proof?—Yes.

713. Can you tell us how much of the profit on a pint of whiskey which was sold at 2s. 4d. to the customer was due to this difference between the 1s. 3d. and the 3s. 6d.; or, in other words, if the retail selling price had still been 2s. 4d. per pint, and Mr. Wells had bought pot still whiskey at 3s. 6d. proof, how much less profit would have been made on the transaction?—I think I should have to work that out as a matter of arithmetic.

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714. Have you any idea about it?—No; but I should think about, if the cost were half—it would not be that because there is only 10 per cent. You mean if it had been a pot still spirit?

715. I mean if it had been a pot still spirit at 3s. 6d. instead of patent still spirit at 1s. 3d., what would have been the difference?—The profit is divided between the wholesale dealer and the retailer.

716. No, I mean as between Mr. Wells and his customer, if he had given 3s. 6d. a gallon for the pot still spirit instead of 1s. 3d.?—At proof?

717. Yes?—It would have cost him 14s. 6d., would it not?

718. Yes. Have you any idea what the difference in profit would have been on that?—I cannot answer without working it out. I think it is perfectly easy to work it out as a matter of arithmetic.

719. I have worked it out, and I was rather surprised at the small difference it made. One would consider in the first instance that probably it would be the difference between 3s. 6d. and the 1s. 3d. divided by 8, or something of that sort, but it is really much less than that. Would you kindly follow me in these details and see if they are correct, because I think it is rather an important point. Mr. Wells, according to your statement, bought his whiskey at 10s. 4d. per gallon at 25 under proof?—You want me to check that?

720. Yes?—Yes, 10s. 4d.

721. Now, if instead of buying whiskey which you say was worth 1s. 3d. per gallon, proof duty free, he had purchased pot still whiskey at 3s. 6d., it would have cost him at proof 14s. 6d.?—Yes, that is right.

722. Or at 25 under proof, 10s. 10½d.?—Yes, that would be so.

723. So that the difference really would have been only 6½d. per gallon?—Would you mind giving me the figures again?

724. 3s. 6d. and the duty 11s. is 14s. 6d., and reduced to 25 under proof it then comes to 10s. 10½d.?—It would be about that.

725. That is a difference of 6½d. per gallon, or an equivalent of three farthings per pint of whiskey sold at 2s. 4d.?—Yes, I think you are right.

726. Three farthings?—I have not followed that out. It would be the 6½d.

727. So that of the large retail profit which is shown of 8s. 4d. a gallon on your figures—that is the difference between the 10s. 4d. and the 18s. 8d., the retail price—eight times 2s. 4d.—we are agreed that only 6½d. was due to the difference in prime cost of the pot still and patent still product?—Yes. Of course, it is the duty that makes the difference. It is an enormous difference.

728. It makes an enormous difference, and I think it requires to be borne in mind that you are getting a reduction on the duty as well?—The duty is the same on both.

729. But the duty is added in with the prime cost of the spirit, and has to be reckoned both in the reduction of strength and in the price?—It is the constant amount of the duty that makes the disproportion appear so much less.

730. But a question has been raised in this Commission with regard to the great difference in the cost of whiskey?—If you eliminated the duty you would get a much more startling difference between the two prices.

731. That is scarcely the way to do it, is it?—Until you reach the retailer it is, is it not? because the duty is not payable until the retailer is ready to take delivery. Is not that so?

732. No; but as between Mr. Wells and his customer you must take the duty in?—Yes, as between him and his customer.

733. So that you may say the purchaser of that spirit at 2s. 4d. was prejudiced to the extent of three farthings?—That may be so.

734. We are agreed about that?—Yes, I will check that afterwards.

735. I think you may accept the figures. I have done it very carefully?—It seems at first sight to be so.

736. As far as I can gather there are two distinct questions involved in this matter. I should like to ask you if that is not so. In the first place there is the true definition of whiskey, and, secondly, the analytical standard—the standard which is to be laid down for the guidance of the chemists who have to determine whether a given sample is genuine whiskey or not. I think those two things need to be kept quite separate?—Yes.

737. The definition of whiskey and the analytical standard?—Yes.

738. The two things, although closely inter-related, do not necessarily run together?—No, not necessarily. If the analytical process is right would they not run together?

739. Assuming that the definition which you have given of whiskey is correct, that genuine whiskey must be produced in a pot still, it by no means follows that the analytical standard, which I think has been laid down as 380 parts of bye-products per 100 litres of absolute alcohol?—That would be in 100,000 parts.

740. Yes; it by no means follows that that standard is absolutely correct?—No.

741. That is subject to revision from further knowledge which may be gained?—Yes.

742. So that the two things are totally distinct?—Yes. One is the expression in popular terms of what one may call a popular fact.

743. I think the definition ought to be kept entirely distinct from the standard. The definition is a fixed thing; the standard would vary according to our knowledge of the analytical process?—I quite agree.

744. If on the other hand your definition of whiskey is not a true one, the standard, of course, falls to the ground?—Yes.

745. It has no *raison d'être*?—No.

746. So after all the crux of the whole question is to get an authoritative definition rather than a standard, is it not?—You have to begin with that. You cannot get to a standard until you get your definition.

747. That is the crux of the whole thing—getting an accurate definition of whiskey?—Yes, certainly.

748. I suppose we shall have Dr. Teed before us to give us evidence on some of the analytical data, and so you see I cannot question you on those points because I do not suppose it would be fair to do so?—It would be very misleading, I am afraid.

749. Now, I will question you on your definition, if you will allow me. In the first place, you define whiskey generally as being a spirit distilled from grain in a pot still. That is so, I think?—Yes.

750. Do you think this definition is in itself sufficiently explicit? Ought it not to include a statement as to the particular form of pot still which is permissible?—I think the term "pot still" is sufficiently well understood in that there is only one type of pot still in anything like general use.

751. Are you aware that there are pot stills in existence which are furnished with rectifying heads and various contrivances of that kind for facilitating fractional distillation?—Yes. They do it very, very partially.

752. And which in themselves approximate to the working of the patent still?—I do not think they do, if you will forgive me for saying so.

753. They are continuous. There are stills of that type?—You mean that have a rectifying head and have a line arm.

754. I do not mean a line arm. I mean something like *this*, if you will allow me to hand it to you. Will you kindly look at page 129 of Nettleton. Perhaps you know it?—Yes.

755. I refer more particularly to the continuous stills given at page 146?—Yes, I see it.

756. With a highly rectifying apparatus at the top in which I imagine something like a patent still product would be turned out?—Yes, I do not think that is in general use.

757. I understand that a still of that nature is in use. I suppose we shall have evidence on it?—

It is very uncommon. I have never seen one. I have never heard of one.

758. Supposing anyone used a still of that kind, would it be legitimate to call it a pot still; would it come under your definition?—Not a pot still if it produces a fractionation like a patent still.

759. That is a pot still. I think we want to define a pot still a little more closely?—If you think it is not sufficiently definite I will try to amend it, but I do not think anyone looking at that would know that it was a pot still. That is quite a different kind of animal to the pot still that is generally known.

760. But that is a fire still?—It is.

761. It has all the elements of the pot still *plus* something else?—But it has the fractionating apparatus.

762. Will you kindly turn to pages 129, 130, and 132, where you see somewhat similar rectifying heads to the pot still?—Yes.

763. Those would come under your definition of pot stills?—I should not like to answer that without knowing the effect of this rectifying column.

764. No doubt it is a fractionation process?—But it depends to what extent.

765. You are endeavouring here, it seems to me, to establish a legal definition, and we must be perfectly certain that there is no misunderstanding as to what is meant by a pot still. Do you think the word "pot still" is sufficiently definite as it stands?—If you include some of these things as pot stills I am afraid I should say "No," if it is possible to include the one you called my attention to at first.

766. They are called pot stills, and the name of the manufacturer is given?—It is at page 146. It has an analysing column and a rectifying head.

767. Still, it is a pot still according to the definition of the manufacturers, Pontifex and Wood?—He calls it here a "fire still." He does not call it a pot still.

768. I think he does in the text?—Possibly, but I was looking at the description underneath it. He says, "Plate 32"—that is the one you have called my attention to—"represents a continuous working fire still." It looks as if they are differentiating between that and a pot still.

769. The others are all like pot stills?—This one on Plate 25 is a pot still. The still itself is evidently a pot still. I should not like to say without consideration what the effect of that rectifying column is.

770. Does not that rather imply that your definition wants revision?—It may want expanding, yes, if you think a pot still might be taken to include some of these uncommon devices. I think they are uncommon. I do not think the rectifying column would have a very marked effect. They have rectifying columns in Scotland.

771. Line arms?—They have rectifying columns, and they produce a very, very strong whiskey indeed for the purpose of blending.

772. Does that come under your definition of pot still?—The rectifying columns I have seen in Scotland would not prevent it coming under my definition. If it is correct it certainly would come under that definition.

773. Unless it is clear on your definition what a pot still is to start with, I am afraid it will give rise to a great deal of difficulty in various ways?—In framing that you would want a definition.

774. I am not arguing that we should not have a definition at all?—But assuming that we are to have a definition?

775. It should be unmistakable?—It should be a definition of pot still. Yes. I do not think it would be difficult to frame.

776. To come to another part of your definition, you stated that Irish whiskey, in addition to its being produced by one special type of still, the pot still, should also be confined to materials of this nature: Malted barley, unmalted barley, with small permissible additions of wheat, oats, rye, that is to say, grain indigenous to Ireland. Is that a correct expression of your definition?—Do you mean indigenous?

777. The word "indigenous" is your own—at least, it is in this definition?—I did not know whether that was the word you wanted to call my attention to?

778. Yes, I am going to. What, according to your idea, is the exact meaning of the word "indigenous"?—Native to the country, I should think.

779. In what way native to the country?—Grown there.

780. Would you call, for instance, the Negroes of America indigenous to the country because they are born there?—I do not think you use the word with reference to human beings.

781. Yes, indigenous, certainly. I can give you an instance of it?—That is a difficult question, because the Negro was imported from Africa. I should think the Americans have found them quite the reverse of indigenous.

782. Your definition as regards indigenous cereals would be that they must be cereals grown in the country?—Yes.

783. Or cereals which are capable of being grown in the country?—Yes. That is based, if I may say so, on history. That is the history of what the materials have been.

784. If we go back to the history of the thing none of these cereals are really indigenous—certainly not barley?—No, I suppose not; but that is going a very long way back, is it not?

785. Yes, it is going a long way back. You define "indigenous" as applied to cereals as being cereals grown in the country, or cereals which can be grown in the country?—I think either.

786. There is rather an important difference. Maize, for instance, can be grown in the country, but you want to exclude maize?—Yes, because I think maize is a different substance. I do not think it ever has been grown with anything like commercial success in Ireland. It is too wet a country to ripen maize.

787. I agree it could not be grown commercially with success; so you would exclude any grain which could not be grown commercially in Ireland?—Yes.

788. Are you aware that some of the barleys themselves—those varieties of barleys which come from the Mediterranean, and off the coast of Africa—Smyrna, Tripoli, and places of that kind—and the Danubian barleys—which I believe are used somewhat largely—cannot be grown in Scotland, or Ireland, commercially?—I do not know that. I have not heard that they have been used in Ireland.

789. I believe that there is a great deal of foreign barley used in Ireland?—I am only going on information I have had. I have seen a great many distillers in Ireland, and they say not.

790. Would not your description, if carried out logically, exclude the use of barleys of that sort?—You mean barleys that could not be grown in Ireland?

791. Yes, barleys which could not be grown in Ireland?—I accept the fact from you that it is so, but I did not know it.

792. Ireland or Scotland, I will say?—But it is barley of the same character—of the same class.

793. It is barley, but it is a very different variety. Some of those Danubian barleys, which I believe are used by distillers, it would be impossible to grow in the United Kingdom?—I think I should take barley as a general term. I do not think, subject to correction, the distinction between Danubian barley, and its characteristics——

794. But you could not call such barleys as those indigenous cereals?—I suppose not—no.

795. Do not you think your definition requires some amendment there as well?—If you try to amend it on that score you are opening a very wide door. It would want careful consideration before you do that.

796. You would put varieties of barleys grown in foreign countries, which could not be grown commercially in England, Scotland, and Ireland, on a different footing from maize?—Yes.

797. Can you tell us why?—They are a different class of cereal, and certainly different in flavour, from maize. There is something in maize—I do not know

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what it is—which differentiates it very broadly from barley.

798. I suppose the public can look after itself in matters of flavour, can it not?—I do not think it can. It certainly has not done. I think if A. B. goes into a restaurant, or a refreshment room at a station, and asks for Irish whiskey, he has to take what is given him, or go without, and he takes what is given him rather than go without very often. I fancy the public is very much more in the hands of the trade than we always realise.

799. Do you think he would go a second time there?—Yes, I think if he were travelling over the same railway, and it was the only available refreshment room, he would. He might provide himself, as some men I know have done, with their whiskey before they started; but if you take the poorer classes they are absolutely in the hands of what the publican likes to give them.

800. I should like you to give the Commission a little further information with regard to why you should put maize on an entirely different footing from non-indigenous barley?—Because maize produces a spirit of a totally different flavour to barley spirit. As a matter of fact and history barley has been used in Ireland. I do not think you could use maize for a pot still in Ireland.

801. That is not what I asked you. Has it not in Ireland been used to a small extent?—Yes, to a small extent, but that was an experiment.

801*a*. Is it not to some extent being done on a commercial scale still?—I cannot be sure.

802. You still think that maize ought to be put on an entirely different footing from other cereals although those other cereals are not produced in the country?—Yes, partly because the flavour is different, and partly because those other cereals are of a like kind to those produced in the country.

803. You would not raise any objection on the score of unwholesomeness as between the two?—No, I do not think so. I do not know of any reason. I will not say there is not. I think very little maize is used for pot still spirit.

804. You regard the patent still spirit as silent or neutral spirit?—Practically.

805-6. You regard those terms as practically synonymous?—Yes. May I call your attention to what Nettleton's book on the manufacture of spirit says? The passage I refer to is at page 228. It is a very accurate representation of the coffey still at patent still distilleries. "The advantages of coffey still distillation over pot still distillation are as follows: A highly rectified and practically pure though flavourless spirit is produced in one continuous operation." You would not call Irish and Scotch whiskey a flavourless spirit. Then there is something a little interesting in the advertisements. Will you look at page 7?

807-8. You put that in evidence, did you not?—Yes. There is an advertisement of the Coffey Still. "John Dore and Co., original makers of the Coffey's distilling apparatus for producing in one operation the finest quality of neutral or silent spirit from raw grain, rice, molasses, etc."

809. You regard then the two terms as practically synonymous?—Yes.

810. Patent still spirit and silent or neutral spirit?—Yes, practically.

811. You would not deny that the patent still spirit contains a certain proportion of bye-products of the same general character as the pot still spirit?—I do not think it contains much ether, and certainly no furfural.

812. That is rather an advantage, is it not?—That is a matter on which chemists differ.

813. I do not think there is any difference on the question of the furfural. I think most people regard that as a thing to be got rid of?—It is a useful index to the analyst. The proportion is so infinitesimal.

814. Three parts to the 100,000, I think?—You cannot say the same of the ether. You do not want to get rid of the ethers. They are a valuable proportion of the spirit.

815. The pot still spirit gets rid of a great many of the ethers?—It preserves a great deal more than the patent still.

816. In what way?—The action of the steam destroys some of the ethers.

817. Does not the action of the continued distillation of the feints in the pot still have the same effect?—I do not think so. I have not been told so.

818. Otherwise I imagine the ethers and the various bye-products would tend to accumulate enormously. It is a fact, is it not, that the feints are never removed from the pot still, but used over and over again?—Yes, if there was no destructive agent going on.

819. Consequently those would gradually accumulate?—Theoretically, yes.

820. It follows that there is destruction somewhere?—Yes. Ethers may go into spirit, may they not? They do, because we find them there.

821. That is a point I should like to say something about, but it is going out of our province a little, I daresay?—It is going out of mine.

822. You admit that there are a certain amount of bye-products in the patent still whiskey, or spirit, as I think you call it, of the same general character as those in the pot still whiskey?—Yes, some of them.

823. It is a difference, in fact, of degree rather than of kind?—Yes, I should think so, except as regards the ethers and the furfural.

824. There are ethers in patent spirit, are not there?—Yes.

825. It is a question of degree and not of kind?—That is so.

826. Is it not a fact that some of the patent still spirits contain as much or even rather more of those bye-products than some of the pot still spirits?—I should think they are monstrosities, if they do.

827. Do not the two things overlap?—Not if the still is properly worked.

828. In commerce, I mean?—I think it is likely. You suggested to me that the analysis would require correction, and so on. I should be inclined to think there is something wrong with the analysis.

829. We have had the analysis given to us by Dr. Teed showing the minimum and maximum in the two cases, and they overlap?—Do you think they actually overlap? You also have this: you have a spirit sent to you as patent still.

830. Assuming there is an overlapping of that kind, any attempt to draw a line between the two kinds of spirit analytically must be perfectly arbitrary?—No; if your premise is right, then your conclusion is right.

831. If they overlap?—Yes. You will forgive me for not accepting it for the moment. Happily under the Merchandise Marks Act we can eliminate the analyst. It does not depend upon the certificate of the analyst as it does under the Sale of Food and Drugs Act. That is a very great improvement.

832. How do you mean "eliminate" him?—Under the Sale of Food and Drugs Act, the analyst's certificate is the basis of the prosecution. If you have a thing that is incapable of analysis, the public can be defrauded wholesale, and have been defrauded wholesale. Under the Merchandise Marks Act you can prove the wrong trade description by any means you like, by tasting or by anything else, and sometimes that is a very valuable aid to testing the correctness of the analysis. In fact, the expert's taste is marvellously accurate.

833. If it is the fact that the patent still spirit is of a silent nature, how do you explain the fact that patent still spirits improve materially in some cases with age?—I think because they are put in whiskey casks; they do not improve in bottle.

834. Do not they also improve in time in plain wood; that is, a cask that has not been filled with whiskey before?—I have some difficulty in answering that. I do not know. I think the improvement is very slight. They are not absolutely silent, of course. I admit that.

835. I imagine the difference in price between old and new patent still spirits indicates that there must be some great change taking place?—Some change. I

think you will find in the list the kind of whiskey is specified. I think you will find that spirit kept in a plain cask does not fetch so much as that which is kept in a whiskey cask.

836. It does improve materially, does it not?—I imagine, from the price, that people think so.

837. It must be owing to some change in the bye-products, and not in the spirit itself?—Yes.

838. So that the patent spirit, after all, is not so silent as we imagine?—It is not absolutely silent. If you can use it either for making brandy or whiskey, it must be tolerably silent; if you can put brandy in and say it is brandy, and you can put whiskey in and call it whiskey, it must be fairly neutral.

839. I suppose, before establishing this standard, you made some very long-continued investigations among the trade as to what has been recognised as whiskey during the last 30 or 40 years?—Dr. Teed did chiefly; rather more than I.

840. He will be able to speak to that?—Yes. I made some inquiries. I went with him on two occasions to Ireland. He went to Scotland twice also. I think he made very exhaustive inquiries.

841. You would prefer that we should ask Dr. Teed that question?—Just as you please. I cannot answer it myself.

842. Do you attribute the increased consumption of patent still spirit in blended whiskies entirely to its cheaper cost of production?—I attribute it to advertisements, to a large extent. It has been advertised to a perfectly extraordinary extent, and everybody knows how it is advertised, through London even, with these electric-lighted things which go up and down. You see them in the Strand, and everywhere. People do not know what Scotch whiskey to get, and these are largely advertised, under highly-respectable and well-known names, and I think they are sold on the strength of those names.

843. You do not think it is a question of cost?—I do not think they are much cheaper to the public. There is a difference, but not very great.

844. Do you not think that it may be due to the increasing public demand for milder whiskies—that is to say, a change in the taste of the public rather than an attempt of the distillers to foist an inferior product on the public?—I should rather put it the other way round. I hope I am not doing an injustice. I can only speculate. I cannot say what is in men's minds. I should think it was the cheapness of the article which led the traders to try and induce the public to accommodate their taste to the cheaper article. I think so.

845. Is it a fact or not that there are many of the so-called self whiskies which are far too highly flavoured, even when thoroughly matured, to be acceptable in their unblended state?—Subject to what you mean by "thoroughly matured." I think that arises from this, that the pot still distillers in Scotland find their best customers in the blenders, and the blenders, knowing that they are going to put patent still spirit into it, want a very highly-flavoured whiskey, so that a small proportion of pot still will flavour a large proportion of patent still. If you take whiskey that is not intended to be drunk till blended and give that to the public, the public would not like it.

846. Is it not rather due to the taste of the public changing—that they are accustomed to a milder whiskey?—I think the pot still whiskey that is used for blending is very different to the old pot still whiskey that was meant to be drunk by itself, and I have known whiskey to the contrary.

847. (*Chairman.*) Is it an improvement, or not?—They do not like many of the highly-flavoured pot still whiskies made in Scotland for the purpose of blending, and it is made as strongly flavoured as possible, not for the public to drink, but to flavour a larger proportion of patent still spirit. On the other hand, I know a relation of mine who appealed to me as to where he could get a good Scotch whiskey, and I recommended him a certain distillery, or the product of a certain distillery, and that has become quite the vogue in his town.

848. (*Dr. Horace T. Brown.*) An unblended whiskey?—Yes; absolutely. His friends, when they go in, say that they have never tasted Scotch whiskey before.

849. (*Chairman.*) Is it because it is so good, that they like that whiskey?—Yes; they like it so immensely. They say it is so superior to anything they have tasted.

850. (*Dr. Horace T. Brown.*) There are many unblended whiskies on the market, are there not—Highland whiskies?—A comparatively small number, I think. It is perfectly extraordinary the amount to which the Highland distillers have given themselves up to producing whiskey meant for blending, instead of meant for self whiskey.

851. (*Chairman.*) Is Glenlivet a blended whiskey?—No, pure. I think that is a self—a malt—whiskey. I take it all the Glen Spey and Glenlivet whiskies are, or the greater proportion of them are.

852. (*Dr. George S. Buchanan*). Not sold to blenders as well?—Of course, a man will not tell you what he does with his produce; but I should have thought not. I know that many of the Glenlivet distillers do sell self whiskey.

853. (*Dr. Horace T. Brown.*) You stated in your evidence that it would be very difficult to obtain evidence from patent still distillers in Scotland, and that the great blenders had captured the Scotch whiskey trade?—Yes.

854. That scarcely looks as though the pot still distillers in Scotland were on very unfriendly terms with the patent still men?—They are not.

855. Or that it was to their disadvantage to sell to them?—I hope you will not press me about that. I should not like to say in public the things that I have heard. I could tell you this, that some of the pot still distillers in Scotland would be delighted to escape from their present position.

856. I suppose we shall have evidence on that?—I do not think they will come. I think they are afraid to. I was astounded, when I was in Scotland, to find the state of fear that the pot still distillers were in. The Irish are all right.

857. (*Chairman.*) What are they afraid of?—They came to see me by night, because they dare not come in the day time. They were afraid.

858. Was that in Scotland or in Ireland?—In Scotland. In Ireland, it is all right. I was looked upon as an arch-enemy of the patent still people, and if those pot still men had come to see me, they might have found that the patent still people would have bought no more whiskey from them. They may have been incorrect, but that operated on their minds. They were men of large means, and not small men.

859. (*Dr. Adeney.*) With reference to the question that Dr. Brown put to you about your meaning of indigenous cereals, do not the Irish pot still distillers claim that their industry exerts a great economic effect on the agriculture of their country?—Yes, I think so.

860. Is not that their contention?—It is their contention.

861. That is why they put it forward?—That is one of the reasons. Irishmen, I know, are sentimental, and there is not the least doubt that the fact of consuming Irish barley is a matter of great importance to the Irish. They do not like the substitution of American Indian-corn for Irish barley.

862. Do you know whether the supply of Irish grown barley is equal to the demand?—Generally it is. Of course if they had a bad year they would get it from England or Scotland, but in nine years out of ten they get it in Ireland itself.

863. You find as a rule the stills are in the barley growing district?—Yes.

864. As a matter of fact, the cultivation of barley has been rather constant in Ireland, has it not, and that of other cereals has fallen off?—I think they have grown a great deal of barley, because it is necessary to supply the stills.

865. (*Dr. G. S. Buchanan.*) Dr. Horace Brown was asking you about a definition. I gather you consider the first essential would be to make certain definitions of these different classes of whiskey in terms of materials or processes, and having done that, to take the chemical considerations afterwards and get the analytical facts corresponding to the particular classes?—Yes. You must establish in fact what you

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mean by spirit, and see if you can ascertain that fact by analytical methods.

866. Objection was taken to that, and it was a natural objection that the different classes would necessarily run one into another, for example, with regard to the processes with the pot still they might by certain gradations tend towards the patent still, or in the same way, when we come to the chemical considerations, that the analytical classes would also overlap. That, of course, is an objection, but it is not a fatal objection to definitions, is it?—No.

867. An arbitrary line must be drawn in cases of that sort, if you want definitions at all?—Yes, I think you would find, except in what I call the monstrosities, the definition is fairly accurate. Dr. Schidrowitz wrote papers on that which support our view.

868. The difficulty, so far as it exists, would be met to a large extent if in addition to the definition based upon the ordinary or normal classes there were some authority or power to vary or to make special alterations with regard to exceptional cases?—I think it would be very desirable if the Local Government Board or the Board of Agriculture had power to fix analytical standards for the various things in the same way as they have for milk.

869. Analytical standards you are speaking of?—Yes.

870. With regard to definitions, for example, definitions in terms of materials and processes, as I have gathered from you, the only whiskey that ought to be called malt whiskey would be the whiskey made entirely from malt?—Yes.

871. Is it not conceivable that a whiskey made almost entirely from malt, that is to say, having 5 per cent. addition of some other substance, would be rather more excellent and yet would deserve the name of malt whiskey?—I think 5 per cent. would be too small to take any notice of.

872. It comes to this, that if you want to avoid the difficulties and objections of arbitrary lines, you must have some authority or power subsequently, on sufficient reason being shown, to vary your limits to meet particular cases?—Yes. I think it would be very important to give some Government Department qualified to deal with this, such as the Local Government Board or Board of Agriculture, power to modify the standards according as knowledge and practice vary.

873. Another one of the points that you mentioned was about the public looking after itself in matters of flavour. A great deal of the whiskey that is sold in this country is sold in public-houses, is it not?—Yes, I imagine that is so.

874. The majority of it?—I have no knowledge of that, but I imagine that it is so.

875. Can you say whether whiskey as sold in tied houses is usually of one particular class of whiskey?—As a rule I believe it is. In tied houses in London the brewer does not supply the whiskey. In many cases the unfortunate publican obtains a second loan from the distiller. He obtains his first mortgage from the brewer, and he has a second mortgage from the distiller, and he is tied to that particular distiller for his spirits. That distiller is generally a London man, in London. I cannot speak with regard to the country practice.

876. If the publican is tied to a distiller in a given case in that way he would only sell what the distiller made?—Quite so; his loan would be called in if he did not.

877. I do not want to go into political questions, but if limitation in the number of public-houses should increase the proportion of tied houses the public will be in a position of having to take what it gets from the trade all the more?—Yes, so long as the houses are tied. I think the tied system is a very bad one.

878. Now a question as to flavour. Do I understand that Irish whiskey, as understood in Ireland, is, according to your contention, generally a pot still whiskey?—Yes, with a few exceptions in the North of Ireland it is universally so.

879. And the special flavour of Irish whiskey is appreciated and is known to the public. Is the flavour obtained as a result of the pot still process?—Absolutely.

880. (*Dr. Adeney.*) Do you think you are quite correct in that statement about Irish whiskey being so largely pot still?—Yes, I think so; I think you can draw a line in Ireland where there is patent still and pot still, or where patent still and pot still are made.

881. Is the patent still spirit all being produced in Belfast?—I think there were two in Dublin. I do not think if you drew a line from Dublin to Galway, or from Dublin to Londonderry, you would find a patent still south of that.

882. Is all the pot still whiskey which is produced in Ireland intended for consumption in the unblended condition?—I think if you drew a line from Dublin to Londonderry it is all pot still whiskey, not for blending.

883. (*Dr. G. S. Buchanan.*) You referred to the materials that were used in the grain aqua or in the patent spirit that was present in the Islington samples. Was the proportion of malt and of other ingredients brought out by any definite evidence in those cases?—Yes.

884. Was this accepted merely on the statement of the person who produced it?—No, taking this particular case, Stevens, Buer and Company, someone from their warehouse was called.

885. Did he produce the books?—I cannot remember that off-hand.

886. In that case there was 25 per cent. of malt and 75 per cent. of Indian corn?—He must have produced evidence about that. The evidence is available; I have it.

887. With regard to Mr. Fordham's definition, which you spoke of here, as to what was Irish and what was Scotch whiskey, I think you said you had to ask the magistrate for the purpose of the Sale of Food and Drugs Act to fix a standard?—Yes.

888. It is not absolutely essential, is it, for the purpose of the Sale of Food and Drugs Act?—It depends upon what you mean by standard. If you say that the thing is different in its nature, substance and quality from the thing asked for, it almost involves the fixing of a standard. You have to say that the thing which is asked for is so-and-so, and that the thing sold is something different, so that you have got in that sense to fix a standard, have you not?

889. I do not think that altogether follows?—How could you do without one?

890. I should have said the definition; I misled you by using the word standard. You said you had to ask Mr. Fordham for a definition of what was whiskey?—Yes.

891. It was that that was in my mind. Is a definition essential to showing for the purpose of the Sale of Food and Drugs Act that an offence has been committed under Section 6; for instance, in this particular case, am I not right in saying that Mr. Fordham, while giving this definition and saying that the particular sample did not correspond with the Irish or Scotch whiskey as laid down in his definition, reserved the consideration of some other cases such as certain proprietary whiskies, and blended whiskies of good price, although they do not come under his definition? He reserved them on the ground that the case was not before him, and would have to be decided separately on its merits when it did come on?—Clearly he did that. May I say you can have a negative definition which need not be exhaustive. For instance, you know that it is daylight now, and you know that it will not be daylight six hours hence, and though you would have no doubt in saying that it is daylight now, it would be difficult to say when daylight ended and darkness began. Therefore, in that way it is easy to say that patent still whiskey is not whiskey.

892. I rather gathered from your proof that before you could take any action under the Sale of Food and Drugs Act with regard to bread or whatever it may be, you must prove definitely what is bread from one end to the other and get a regular definition of it?—Yes, or else what is not bread.

893. What is not, very often, is much easier to show than what is?—Yes, much easier.

894. May I read you this definition of whiskey from the Sale of Whiskey Bill that has just been introduced

in this Session? Does that represent practically your definition: "The expression 'whiskey' means the product of the distillation of the fermented wort of pure malt, or of malt and corn with yeast and distilled in a pot still." I do not know if you agree with that?—No; I do not like the word "corn" there. I think it requires a definition.

895. (*Chairman.*) If you say it is impossible to distil maize mash in a pot still, that is not a serious objection?—I do not think it is impossible to do it, but it is impossible to distil from a maize mash a spirit that anybody would think was Scotch or Irish whiskey—quite impossible.

896. But it would be whiskey?—Yes.

897. (*Dr. G. S. Buchanan.*) You spoke of Bourbon whiskey, which I have no knowledge of at all. I gather you would like it to be sold as whiskey without any qualification?—Yes, I should think so; I should like it to be called Bourbon whiskey; it is well known under that term, I think.

898. If you went into a shop and asked for whiskey you could be supplied with Bourbon whiskey?—Yes, strictly, but I do not think you would drink it. The difference is so obvious that the ordinary consumer would refuse to take it.

899. I do not see why you insist upon a specific name of Scotch whiskey and Irish whiskey for those particular products, if you do not require a similar specific name for Bourbon whiskey?—I am quite ready to make the definition stricter if necessary. Scotch whiskey and Irish whiskey are recognised species of whiskey. They have a different flavour, and so on, and a consumer expects a certain thing when he asks for one or the other, as distinct from the generic term of whiskey.

900. You spoke about drunkenness in relation to the character of the different kinds of spirit used. You said that pure alcohol, or ordinary patent still spirit, would not satisfy a man so well as the more flavoured alcohol. Was your contention this: that the more strongly flavoured whiskey is, the more economical it is, because a man does not drink so much of it?—Yes, he puts more water in.

901. That is a common experience, is it not, that the strongly flavoured whiskey is a more economical whiskey?—Yes, in that sense. It seems to be an evil that where you want to dilute a thing that you should dilute it with alcohol.

902. You were asked a question about the definition of brandy. Can you say anything about it, or can you tell us where to get the definition of brandy that is in use under the French law; do you know the restrictions?—No, I do not think I do; I can get them for you. You get the definition in the book of those celebrated French analysts, Girard and Cuniasse.

903. Assuming that there was any special objection on health grounds to a perfectly new spirit, that is a new spirit as distinct from an old spirit, the use of the patent still would in some way enable the new spirit to be used more readily, would it not?—I think so. I think there would be less objection to new patent than new pot.

904. New pot is practically undrinkable by an ordinary person?—They say if it is absolutely new, you can drink it, but when it is a month old you cannot.

905. Can you tell me whether the pot still product which is used for blending the sort of whiskey that was sold in Islington is a new spirit?—I think in one case it was four years old. That was 1901; that is judging from the invoices. I am assuming the invoices were correct.

906. Dr. Brown asked you about the difference of profit that was made. I gathered that the profit made by the retailer, or the profit made from beginning to end of the transaction, was something like 8s. 4d. a gallon?—Yes.

907. And the difference which would have been made if the publican had supplied a pot still whiskey would have been less than a penny, or about a penny?—Three farthings is the difference which the retailer would have made.

908. (*Chairman.*) On what?—On a pint.

909. (*Dr. Horace T. Brown.*) 6½d. on a gallon. 8s. 4d. per gallon, of which 6½d. represents the difference in price.

910. (*Dr. G. S. Buchanan.*) I suppose it might be put if the retailer makes so large a profit, as he evidently did in this transaction, he might be expected to give a better article?—I think that is the natural assumption.

911. (*Chairman.*) You said just now that you thought a Government Department might take charge of the standard and modify the standard. In what sense do you use that word "standard"?—I was rather thinking of a concrete instance. There used to be a great difficulty about milk, and public analysts differed as regards their standard for milk. The Board of Agriculture was authorised to fix a standard for milk which now governs all analysts and all Courts.

912. That is a certain proportion of water?—Yes.

913. That is perfectly simple, but please apply that idea to this. You do not want to stop the sale of this patent still whiskey at all?—No.

914. All that you would ask is this. There would be no standard there, but it would be simply a matter of declaration to the public that it was patent still whiskey?—I should a little object to the word "whiskey"; say "patent still spirit."

915. Where does the standard come in? Is it on the question of blend?—The question would first of all be whether patent still spirit was to be called whiskey. That has to be settled first.

916. I should not call that standard. You are speaking of a Government Department standard. I want to know how that practically can be done?—Perhaps I ought to say modified definition.

917. You modify the definition of the thing, but take the question of blends. How are you going to deal with that?—I should have thought, if you established this first of all that patent still spirit is not whiskey, it must be that the addition of patent still spirit to whiskey is an adulteration or a mixture, if you established first that it is not a whiskey.

918. You said, "If you put water into these spirits." You do not call that adulteration?—Beyond a certain point it is. Beyond 25 per cent. under proof it is not whiskey, or rather it is an adulteration.

919. Your proposition would be that patent still whiskey blended with pot still whiskey amounts to an adulteration?—Yes.

920. Ought not you to forbid it?—You only forbid adulteration below a certain point when you add water. It is really a question of the knowledge of the purchaser.

921. What is the necessity of the modification of such a standard?—I admit my definition might have to be qualified by various circumstances or various facts, which were not present to my mind, and which may be elicited by this Commission. Those facts and circumstances might not be elicited here, but might be elicited by experience, and it might be found out that the definition was too strict, or too lax. It would either let in things that ought not to be allowed in, or would keep out things that were fairly entitled to come in; and it would be rather a good thing to have a little elasticity in the framing of the definition from time to time, according to experience.

922. (*Dr. G. S. Buchanan.*) You would not want a Royal Commission each time?—No.

923. (*Chairman.*) Nor a new Statute?—Nor a new Statute.

924. Would you give the Government Department power to prohibit the sale of what you call adulterated whiskey beyond certain points?—No; not to prohibit it absolutely.

925. What then?—To state what knowledge should be given to the public of what there is in the particular bottle.

926. But your whole principle is that the knowledge of the truth should be always given?—Yes; always.

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927. What do you want more?—At the present moment the reason why the Commission is here is that people differ very widely as to what whiskey is, and they say that "Scotch Whiskey" may be applied to dozens of things.

928-31. You say that the proportions in a blended whiskey may change?—I do not mean that; but I meant, rather, as to the materials that might be used in making whiskey.

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

THIRD DAY,

Wednesday, 4th March, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. *(Chairman).*

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. *(Secretary).*

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Mr. ARTHUR J. WALTER, K.C., called.

932. *(Chairman.)* You are one of His Majesty's Counsel?—Yes.

933. Were you instructed when the proceedings were taken at the Police Court to appear on behalf of the defendants?—I was instructed at the Police Court with Mr. Fletcher Moulton on behalf of the defendants.

934. Afterwards, as we know, Mr. Fletcher Moulton was made a Lord Justice, and then you were leading Counsel at Clerkenwell?—I was leading Counsel at the Quarter Sessions at Clerkenwell.

935. We know there were two defendants, Wells and Davidge, and technically you appeared for them, but I believe your real clients were distillers in Scotland and Ireland?—That is so, my Lord.

936. We may call them generally those who are known as the patent still distillers?—That is so.

937. We have had it from Mr. Bramall, but we will also take your view: what do you say were the charges that were made against those two defendants? You will confine yourself I presume to the information or the summons?—Yes. The charges in both cases were charges made under the Food and Drugs Act, 1875, that both defendants had sold to the prejudice of the purchaser an article not of the quality demanded. In one case a purchase was made of Scotch whiskey and in the other a purchase was made of Irish whiskey. It was alleged in each case that an article not of the quality asked for had been supplied, and the certificate of the Inspector went on to describe what whiskey was.

938. That was in the summons?—In the summons or in the document attached to it.

939. Substantially it would be part of the complaint?—Yes. Then it was alleged what Scotch whiskey and Irish whiskey meant.

940. Would you refresh your memory if necessary by looking at the certificate?—Yes, I have a copy of the certificate of the public analyst. It was alleged that Irish whiskey (that was the case of Wells) must be made in a pot still, but that it must be a product of the distillation of barley, malted or unmalted, and wheat, but subsequently that was altered by the addition of oats and rye. It was further alleged that the article sold as Irish whiskey must contain at least 380 parts of impurities per 100,000 of absolute alcohol.

941. You say that was the Irish whiskey case?—Yes. The same thing was the case with regard to Scotch whiskey, and in neither of the summonses was any distinction drawn between Scotch whiskey and Irish whiskey. They were both defined solely as products of the pot stills made from a mash having the constituents that I mentioned, and that that must contain not less than 380 parts per 100,000 of absolute alcohol.

942. The impurities did refer both to Scotch and Irish whiskey?—Yes, my Lord.

943. We had better follow out the proceedings. Before the magistrate, Mr. Fordham, there was a conviction?—Before the magistrate there was a conviction.

944. Then there was an appeal to Quarter Sessions at Clerkenwell and the magistrates were equally divided?—Yes.

945. Therefore the appeal fell through—at least it was not determined?—Yes.

946. And in consequence of this Commission it has not been revived?—It has been adjourned from time to time.

947. But it has fallen through now?—It has fallen through I believe altogether now. I am told by the solicitor who instructed me that it in fact still stands respited.

948. But no other proceedings have been taken?—No other proceedings have been taken.

949. I ought to have asked this of Mr. Bramall, but it will be the same coming from you: the evidence for the prosecution before the magistrate, Mr. Fordham, consisted in calling Dr. Teed, the analyst of the Islington Borough?—That is so.

950. Then there were other witnesses, experts, called—I am not speaking now of the witnesses to the sale or anything technically?—I think the only strictly expert witness who was called on behalf of the prosecution was Dr. Teed, the public analyst.

951. That was before the magistrate?—That was before the magistrate, and I think before the Quarter Sessions, too, on behalf of the prosecution.

952. But there were other witnesses called?—There were other witnesses called. They called various pot still distillers, and they called a certain number of members of the public who gave their views as to what whiskey meant.

953. What was known by the public as whiskey?—What they considered as members of the public was meant by whiskey.

954. So as to explain what the person would expect to get if he asked for it?—That I believe was the view with which the evidence was given.

955. Was there an extension of the evidence at Quarter Sessions?—At Quarter Sessions there was considerably further evidence given than that which was given before the magistrate.

956. There would be an extension of the evidence on both sides, I suppose?—I think on both sides, but certainly on the part of the defence.

957. And I suppose the evidence given by way of extension at Quarter Sessions followed the same lines as that which was given before the magistrate?—Except this, that before Quarter Sessions, owing to the view that the learned magistrate took, there was a great deal more trade evidence called on behalf of the defence, showing the large sale for many years both by wholesalers and retailers of the product of the patent still as whiskey, Scotch and Irish.

958. You have told me what was the case in substance put forward by the prosecution, and, if necessary, I can recall Mr. Bramall if he differs at all. What was the main feature of the case put forward by the defence?—The main feature of the evidence that was put forward on the part of the defence was, shortly, as follows: It was first contended on behalf of the defence that Scotch whiskey could only be the product of manufacture in Scotland, and that Irish whiskey could only be the product of manufacture in Ireland.

959. That I should think would be admitted?—That was our contention all through, and as I called your Lordship's attention to it in alleging the offence in the summons, no distinction was drawn between the Scotch and Irish whiskey. Then the next contention on behalf of the defence was that whiskey was the name for a spirit distilled from a mash of cereal grain; that the starchy matter of the grains could only be converted into saccharine by the diastase of malt; that you could not use acid or anything of that kind for the purpose of producing the potable spirit, whiskey. It was further contended (which was only the negative of the former proposition) that neither molasses nor potatoes nor anything other than cereals could be used for the production of whiskey or of Scotch whiskey, or of Irish whiskey. Then evidence was led on behalf of the defendants as to prior user.

960. What was your contention in respect of maize?—Our contention was this, and that was the next point I was coming to. It was proved that in 1846 maize began to be imported into this country owing to the repeal of the Corn Laws, and it was proved that for over fifty years at least maize had been used as one of the constituents of the mash for the production of whiskey.

961. In both stills?—Whether in the early stage it was in other than the patent still I do not know, but it was proved that it was being used at the present time in a pot still as one of the constituents of the mash for the preparation of pot still whiskey.

962. You say a pot still; was that one still or was it general?—The only evidence given was of one which was, I think, a case of the Caledonian Distillery. I remember evidence was given in one case of that being done. The defendants contended that as maize, which was used like other cereal grains because of the starchy matter contained therein, had been used for over fifty years, it was impossible for the prosecution to support their first contention that maize was a substance that could not be used for the preparation of whiskey.

963. That, of course, is only one point. Would it inconvenience you now if you gave to the Commission what you contended, or what you say should be contended to be your definition of whiskey?—It was contended on the part of the defence that the definition of whiskey was this: A spirit obtained by distillation from a mash of cereal grains saccharised by the diastase of malt, the starch converted into sugar by the diastase of malt. It was to that, and that alone, that the defendants, for whom I was actually appearing, contended that the term "whiskey" should be applied, and that the Scotch whiskey should be limited to whiskey prepared in Scotland in that manner.

964. Of the character you mentioned?—Of the character I mentioned, and that "Irish whiskey" should be limited to whiskey prepared in Ireland in the manner I have mentioned, and that "whiskey" should be limited to a product obtained also in the way and from the materials I have indicated, and that the term "whiskey" could not be applied to anything obtained from potatoes, or anything other than cereal grains, and even from cereal grains the conversion of starch into sugar could not be made by other than malt.

965. Do you say may be made by other than malt or must be made?—It must be converted by the diastase of malt and not by acid. That was the contention put forward on behalf of the defendants in that case. They said that whiskey had never been made other than by that conversion, and that the term "whiskey" could not properly be applied to materials other than that.

966. Failing these conditions that you have mentioned, you would admit that the product would not be whiskey?—That was our contention.

967. For the protection of your trade?—It was the contention of those whom I represented in this case that nothing else could properly be designated whiskey.

968. You have used the terms Scotch and Irish whiskey and the general term "whiskey"?—Yes.

969. Would that include English whiskey?—Whiskey apart from Scotch and Irish whiskey. It was desired to give the same limitation as to the mash and to the methods of conversion, but, of course, it could be made in other places than Scotland or Ireland, and then could properly be described as "whiskey."

970. Made in England?—Yes.

971. Would Bourbon whiskey, the foreign whiskey, come in under that?—Undoubtedly. Bourbon whiskey is a product of maize—a cereal grain.

972. What do you include under the term "cereal"?—Barley, wheat, oats, rye, maize.

973. Rice?—Rice was not included. Rice was not a substance which upon the evidence had ever been used for the preparation of whiskey.

974. I thought there had been some?—Not so far as my recollection serves me. The evidence for the defence was, that no substances other than barley, malted or unmalted, wheat, oats, rye, and maize, were used. Then as regards the methods of preparation the case as made on behalf of the defendants was shortly as follows:—The mash, whatever vessel is to be used for distillation, was prepared in precisely the same way, that is to say, the starchy matter in the grains was converted into saccharine matter by the diastase of malt, and then under the action of fermentation the chief product, of course, was ethyl alcohol, which is the chief product of all fermentation by yeast on a saccharine matter. There are in addition to the ethyl alcohol the various higher alcohols, the methyl, the propyl, the butyl, and the other higher alcohols. There are the ethers and the compound ethers, and there are the aldehydes and acetic and other acids. All these are bye-products and necessary products of the fermentation process. The evidence that was given on behalf of the defence was that in the method of preparation of the mash for distillation in the patent still the results were identical up to the stage at which the fermentation ceased. Then evidence was led on behalf of the defence as regards the process of the distillation in the pot still. It was pointed out that that process was as follows:—That in a pot still first of all the whole of the solid matter, the water, the ethyl alcohol, and all the other bodies I have mentioned, which may be called bye-products, or which in the summons are called impurities—that all those were put into the wash still, and that they were then distilled either by live heat applied outside the still, or by steam jacketing the outside of the still, or by steam coils within the still, and that the whole of the volatile matters were distilled off from the wash still, that is to say, that was the first fractionating process.

975. What does that mean?—It was separating the wash into fractions. The water, the solid matter, and possibly some of the very high boiling point bodies remained in the spent wash, which was all that remained in the still after the distillation process had gone on. The whole of that was run away. Then the product that came over containing all the alcohols and other bodies, which is now the low wines, the low wines were then in Scotch practice re-dis-

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tilled, and again the process was a process of fractional distillation.

976. Is this as regards both stills or one?—I am dealing first with the pot stills. I will deal with the patent still afterwards. With regard to the pot still the evidence was this: that, after you had got the low wines which contained the water the ethyl alcohol and the other bodies, that was again subjected to a second distillation, which distillation was conducted either by external heat, by fire, by steam jacketing, or by steam coils within the still, and that what was done was—you gradually raised the temperature. First of all, the low boiling point bodies began to come off, and those were technically called feints. All those were rejected. Those do not constitute whiskey, and in the pot still do not enter into the composition of whiskey. The feints having passed off, the man in charge of the still detects when ethyl alcohol is coming over, and he then disconnects the feints receiver and connects the worm. This being the still, the distillate comes over *here* and passes into the worm, and when that which is passing off from the end of *this* pipe is detected to be spirit then the feints receiver is disconnected, and the spirit receiver is connected and the spirit comes over. There comes a time, however, when the man recognises—and on the evidence it was shown to be the fact that a small portion of the liquid became turbid when placed in water—he detects that an undue proportion of bodies being the higher boiling point bodies, the higher alcohols, were beginning to come over. Thereupon the worm is disconnected from the spirit receiver, and those which come over are separately collected. Those are the feints. The foreshotts were those that first came over. Then what comes over after the spirit is the feints. The only thing that was whiskey was the intermediate product of this process, which is the fractional distillation. This matter was further given in evidence that in whiskey distillation, as in every process of fractional distillation, though you endeavour by a fractional distillation to separate out a compound body into its parts, it is impossible to completely separate so that when whiskey passes over, some of the foreshotts have lagged behind and come out with the whiskey. Some of the feints are dragged forward and pass out with the whiskey, so that you obtain by the distillation in the pot still a fraction mainly consisting of ethyl alcohol, but containing certain bye-products, aldehydes, ethers, compound ethers, and higher alcohols and acids. That was the process of distillation as described in evidence with regard to distillation in a pot still according to Scotch practice. As regards Irish practice it differed slightly in that at times there was a third fractional distillation. Now that was the pot still distillation. It was contended on behalf of the defendants that the patent still differed in no essential feature from the pot still distillation. First of all, in the pot still there is a large quantity of water present with the ethyl alcohol and the other bodies; that water is by the action of heat converted into steam, and the steam carries over with it as it passes over through the worm all the more volatile products—the ethyl alcohol and the other bodies. So that live steam was an essential feature of every system of pot still distillation. That was the evidence that was given both before the magistrate and before the Quarter Sessions. Now, coming to the patent still distillation it was pointed out that that differed in no essential respects from the pot still—in fact it was only a small series of pot stills. That was the evidence that was given. There were two columns in the patent still, one the analyser, and the other the rectifier. If I may trace it out from the wort tank, the wort containing the solid matter, the water, the ethyl alcohol, and all the bye-products, was passed, first of all, through the rectifier in a pipe. It entered cold. It passed backwards and forwards through the rectifier, being heated as I shall afterwards point out, by that which was coming from the analyser, so that the wort entered at the top cold and passed out at the bottom nearly boiling, and came up by a pipe and entered at the top of the analyser. Inside the analyser were a series of trays down which the contents of the wash passed. Instead of heating this whole structure by a fire or by jacketing it, you passed live steam into it. The live steam entering at the bottom gradually heated up—it affected the top first where it met the incoming wash, which was nearly boiling at the time, and the steam carried off with it all the volatile matters; it carried off the ethyl alcohol, it carried off all the bye-products, the higher alcohols, the ethers, and all the others, and then passed off into the bottom of the rectifier. Now, in the rectifier, products of different boiling points were separated; there was again a series of trays. Now, as I pointed out, the wash entering at the top was cold, and at the bottom was hot. There was a graduated temperature from the top to the bottom of the rectifier, and at various stages the different products separated out, and at a point where the majority of the product was ethyl alcohol, at that point the spirit pipe was put and drew off the spirit, but as it was pointed out in evidence, in that form of still, as in every form of still, you cannot alter the laws of nature. You cannot separate by fractional distillation these various boiling point bodies one from the other. It is a more perfect still as was given in evidence than the old pot still, but a still can only partially fractionate, and the evidence given on behalf of the defence was, that the spirit drawn off from the rectifier at the point where its chief product was ethyl alcohol, contained every body which was present in pot still whiskey, but the proportion, owing to the more perfect apparatus, was less than the proportion of the impurities presented in the product of the pot still.

977. Is the result of what you are saying that, according to you, the two processes were substantially the same?—I think I am correctly summing up the evidence when I say your lordship has put really what the evidence was. It was a difference in degree and not in kind at all.

978. I should be putting a question to you on a subject with which you are familiar if I ask you was Coffey's patent a good patent?—I think it would have been a very good patent. It is, of course, a very early patent—1831, but I think it undoubtedly would have been a good patent.

979. And no previous user?—No. I happen to know, because in another case in which I have been recently concerned it happened to be the earliest of the stills that was referred to.

980. They could not have been substantially the same?—No, but this was a more perfect still. That was the broad nature of the evidence given, that it was a more perfect still designed for fractional distillation, but that it suffered from the defects of all apparatus for fractional distillation. Then it was pointed out in evidence that the pot still had passed through various progressive stages, and from the original kettle with the wooden pipe leading from it various improvements had taken place in pot stills having as their object the same thing as patent still, namely, the better purification of the distillate, and that long arms, and tall heads, by which some of the distillation products dropped back again into the still, that all those matters were added.

981. In the first place, the pot still was generally very old?—Very old.

982. What do you say as to the product of those stills? If you use the same materials in pot and patent still what would be the product of each?—The evidence is that the product as regards materials would be identical, but that the proportion of the bye-products to the ethyl alcohol would be higher in the pot still than they would be in the patent still.

983. What is the practical result to the consumer? —The practical result to the consumer upon the evidence as given by witnesses who had used both was——

984. On which side?—For the defence—the evidence given was that it was whiskey, that it possessed all the characteristics of whiskey, but taking the patent still it was a milder whiskey than the pot still.

985. Is that mildness a virtue or not?—If I am asked personally I consider it is. I personally drink nothing but patent still and have not for many years.

986. On account of its mildness?—Yes—the same as Sir James Dewar. I first drank it at Sir James Dewar's house, and I was so delighted with it that I never drink anything else. As a matter of fact, I drink very little, but whenever I do I prefer the patent still. I cannot stand the pot still.

987. The pot still whiskey would be a stronger whiskey?—It is not stronger in the sense of being more alcoholic, but it is a stronger flavour, undoubtedly.

988. Would a person be able to take more water with the one than with the other, and produce the same result?—I doubt it.

989. If there is a stronger flavour it would bear the greater dilution, would it not?—It may be so. That I do not know, but it is a question. I should have thought the water was purely and simply a matter of taste. I am, of course, only giving your lordship the summary of the evidence that was given. I do not pose as an expert myself, although I do happen to know something about these subjects. The evidence, I think, amounted to this, that the potential material was the ethyl alcohol and the dilution with water seems to be much the same whether you dilute pot still or patent still.

990. But a person would get more to drink if a wineglassful of whiskey would stand a tumblerful of water and the other, the milder, would only stand half a tumbler. If a man is thirsty he has more to drink?—It may be so.

991. You have told us your view as to the result. Now about the expense?—The evidence given was this, the expense was divided into four heads. So far as regards the mash the evidence was, there was practically nothing in it whether you had maize as a part of the mash or whether you had the ordinary pot still mash, there was substantially nothing in the price because the price of maize was at times higher than the price of barley, and substantially there was nothing in the price.

992. You are now talking of the expense to the distiller for production?—Yes. The great saving to the distiller was this, that the Coffey still was a continuous process still and not an intermittent or interrupted still as the pot still was. That for the same capital expenditure the capital cost per gallon spread over any particular period was very much less for the patent still than it was for the pot still. Further, that the cost for coal was very considerably less for the patent still than it was for the pot still, and, further, that the cost for labour for working the patent still was also very much less than the cost for working the pot still.

993. Could you give us any approximate figure of the proportionate cost of production of the two?—I think I can put my finger on the actual cost. I find that in the evidence given by Mr. Calder, a distiller, at page 260 of the notes of the proceedings before Quarter Sessions, he was asked this question: "Can you compare the cost per gallon of coal required for the production by the pot still and by the patent?—The cost would be about twice as much in the one as in the other." That is as regards coal. "Now as regards labour, can you tell us about the average proportion paid for labour per proof gallon in the case of the pot still and in the case of the patent still?—I should say at least twice as much."

994. That is by the pot still?—Yes.

995. That does not reduce it to a figure?—I am afraid I cannot give your lordship the figures. It was somewhere in the neighbourhood of, I think, about 1s., which was the actual cost per proof gallon. I believe it was somewhere in the neighbourhood of that, but I cannot give your lordship the exact figure. Witnesses will come who will give your lordship accurate information.

996. Can you also now refer us to any evidence that was given as to the usual difference in price charged by the distiller to the retail dealer?—That varied entirely according to age. The evidence given was that patent still, new, varied, from, I think it was, about 1s. 6d. up to, I know, as high as 7s. a gallon.

997. That is without duty?—That is without duty, that is to say, that patent still spirit which had been kept in bond for some seven, eight, nine or ten years, in which, of course, the evaporation had taken place, and in which, of course, the changes due to age had taken place—it was given in evidence that as high prices as 6s. and 7s. per proof gallon were paid for old patent still spirit.

998. Cannot you draw a comparison of prices between old and old and new and new?—Personally, I cannot. I do not think the evidence justifies me in stating what I know your lordship will be able to obtain accurately from other witnesses.

999. You will leave that to others?—Yes.

1000. From the evidence can you tell us anything about the practice of blending?—Yes. Several blenders were called on behalf of the defence, and the evidence given roughly was this: They said that for many years, running back in some of their recollections to, I think, forty years ago, a patent still spirit had been used to blend with pot still spirit, that the blend produced by that was not a mere dilution, but was an essential feature to bring out the respective flavours of the pot and patent still; to use a phrase that was used, I forget whether in evidence but I think it was in evidence, that it was necessary for the proper marrying of the spirits that patent still spirit should be used; that the demand had largely arisen for milder spirits than the pot still spirits were—milder in flavour; that that want could only be met by the blending of pot still whiskey and patent still whiskey. It was further in evidence that patent stills differed considerably amongst themselves; that the products of different patent still distilleries were quite distinct in their flavours and in their qualities; Cambus, Carsbridge, Caledonian, and the various other patent stills differed from one another, and could be detected in their flavours from one another; that the prices paid for them varied, and that it was part of the blender's art and one of his most valuable trade secrets to know in what proportions to blend what patent still spirits and what pot still spirits in order to produce the particular flavour which his whiskey was known for. The blenders, in consequence, objected to being compelled in any way to indicate the proportions of their blends upon any labels that were placed upon the whiskey. That was the general nature of the evidence as to the blending. It was given also in evidence by blenders and others that patent still spirits matured in precisely the same way that pot still whiskey did. The contention on the part of the prosecution was this: they said this patent still product is a mere silent spirit which has no characteristics, and you put it in old whiskey casks, or you put it in sherry casks, in order that in the process of time it shall acquire a flavour from those and pass as whiskey. The evidence given both on behalf of the distillers and blenders for the defence was that that was not the case at all, that when kept in plain wood the same changes went on as went on in the pot still, and the technical evidence by Sir James Dewar and Dr. Tatlock, and others given on behalf of the defence, was that the process that goes on of ageing is a process in which the oxygen of the air plays a large part, that there is a breaking up both in the pot still and in the patent still by age of some of the bye-products which are present in the new whiskey, and that these features which largely give flavour and taste to these articles are substances which chemistry at present has not been able to define. They cannot be isolated; there is no chemical test known for that which gives the flavour, but Sir James Dewar said that both in pot stills and in patent stills the same process of ageing went on in both of the two types of whiskey, the patent still and the pot still.

1001. Is there any difference as to the effect of the duration of time upon maturing between the two?—Undoubtedly. It was given in evidence that the patent still became mellower earlier in time than the pot still.

1002. There was less resistance?—There was a less proportion of the bodies in it, and they required less time to become altered.

1003. I suppose the evidence was that the blending did produce different characters of whiskey, so that a person accustomed to drink whiskey could tell the difference?—Undoubtedly. The evidence given on behalf of the blenders was that their particular blends of which they had knowledge, as to what pot stills they took, and what patent stills they took, produced certain flavours, the secrets of which, as they gave in evidence, were matters of high commercial value to themselves.

1004. Take the leading Scotch distilleries. I think Glenlivet is a pure pot still?—I believe so, but I have no personal knowledge.

1005. But certain of the distilleries obtain a character for a particular flavour by virtue of blend?—Yes, the evidence went further than that. The evidence given as regards flavours, if I may amplify that in a moment, was this: there is no one spirit which is known as Scotch whiskey. There are five

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distinct classes of Scotch whiskey. There are the Highlands, the Campbeltowns, the Islays, the Lowlands, and the Grains—the Grains being those from the patent still; that the proportion of impurities in those varied infinitely among themselves, and infinitely in class; that the flavour of each of those classes was quite distinct, yet that all of them were properly described as Scotch whiskies, but that there was no characteristic feature which was common to all the classes, and as one of the witnesses who was called on behalf of the defence said—he made at the time what struck me as being a very happy simile—he said, if you go into a grocer's shop and ask for tea you cannot grumble if you get China tea, although you have been in the habit of drinking Indian, and if you have been in the habit of drinking a blend you cannot grumble if you get either a China or an Indian tea, or a blend. So that if you go and ask for Scotch whiskey, and you have been accustomed to drink Highland whiskey, you might not at all like it if you got Lowland whiskey, but you cannot complain, because you have asked for Scotch whiskey, and whether it be Lowland or Highland, Islay, Campbeltown, or grain, they have for many years, certainly for fifty years, including grain, been described as Scotch whiskey, sold as Scotch whiskey, and asked for as Scotch whiskey. Of course, there was a large body of evidence given that old grain whiskies, that is old patent still whiskies, were immensely sold in Scotland.

1006. See if I can get the effect of these matters from you. Taking an ordinary person drinking Scotch whiskey who would be in the habit of having it from one particular distillery, he goes and asks for Scotch whiskey at another vendor's, and he obtains it from another distillery. Would the difference between those two Scotch whiskies be so great that the ordinary person would detect them?—Undoubtedly. The evidence given was this, that there was a far greater distinction between Highland and Lowland than there was between Lowland and patent still whiskey.

1007. Where do you say would be the injury to the patent still distiller, or the pot still distiller, if some mark is put upon the vessel that contained the whiskey, be it cask or be it bottle, which showed what was the character of the whiskey being sold, because you have shown there is a different character, and why should it not be shown to the public?—The position that was taken on behalf of my clients was this, that they had not the remotest objection to their whiskey being described as grain whiskey, or the blends being described as blends of pot and patent still whiskey. They had no objection to that at all, but they said, if you are going to do that for the patent still people it is only fair that everybody should be compelled to state either that it is patent or, if you like to go further still, that you shall say it is Islay or Campbeltown, or whatever it may be. What was sauce for the goose they did not have any objection to being sauce for the gander.

1008. Or sauce for the other goose?—Or sauce for the other goose.

1009. I want this from you particularly: in the first place, they would not object, would they, to the statement being made that it was either pot still or patent still?—I think not. The gravamen of all their objection was, they said this is whiskey which for fifty years has been sold and called whiskey, and so long as it is called whiskey we have not the least objection.

1010. It would still be called whiskey. I do not know whether the public would discriminate very much between pot and patent, but I wanted to know whether those you represented would object to the fact being stated of it being pot still or patent still?—Again I am only speaking from the evidence which was given in the Court below. I have no knowledge other than that which I gained as advocate in the case, but the view that was then taken on behalf of my clients was that some such definition as your lordship has indicated there was no objection to whatever.

1011. Would there be any objection to stating, in addition to stating Scotch or Irish, the distillery from which it came?—The real difficulty that arises there, as pointed out in the evidence, was this: there is so much reblending of blends, and although you might on an original blend, say, of two particular distilleries, put down what it was, when it came to reblending and reblending the real difficulty that was pointed out was that it was impossible in cases of reblending to say exactly what it did consist of.

1012. There would be no objection, I suppose, to stating the distillery that sends it out to the retailer—that would be after the blends were made?—The evidence given was that the blend was chiefly done by blenders who were themselves merchants, and that the blending is not done by the distillers themselves.

1013. I see in one of these very cases the blending was done in Mincing Lane?—Yes, and, of course, the cask from the distillery goes out with the invoice, whatever the distillery may be. It is clearly indicated there.

1014. I see the difficulty of that. It is a minor point, but there could be no objection to stating the age of the whiskey, could there?—There, again, the same serious difficulty comes in as in the case of blending and reblending, if you take a three year old patent still and a ten year old pot still.

1015. If it is unblended whiskey there could be no objection?—Not the least, as far as I know. The evidence given was that a great number of publicans who were called from Scotland advertised their wares by labels over their shop front windows and on their bottles "ten year old Cambus," and it was one of the indicia of virtue that they had.

1016. Can you suggest anything as to the extent to which the materials might be mentioned?—I doubt very much whether there can be any advantage, certainly, judging from the evidence in putting the materials. So far as I know the views of the trade they desire to be confined to a cereal spirit produced by malt. After all, there seems to be little reason why the source of the mash should be defined, and it is very, very difficult in the case of blends to know how you are going to define it. One would have to have a label covering up all the bottle if you define all the materials. I see great practical difficulties in it.

1017. The question of the blend presents itself to the Commissioners, no doubt, as being a difficulty, but we must speak of unblended whiskey?—The only evidence as regards the sale of the patent still spirit neat was given by vendors who came from Scotland, who sold it as the very finest brand. The evidence which was given was very peculiar. When you wanted to have a special whiskey the special whiskey was the old pure patent still spirit. That was their "Special," and when you wanted a cheaper whiskey you had a blend.

1018. Surely the pot still whiskey would be an old-fashioned whiskey, too?—Yes, but the evidence given from Scotland was very curious on that. There was evidence for the prosecution from the North of Scotland, where there is much pot still still sold, but the evidence from the neighbourhood of Glasgow and Rothesay and the southern parts of Scotland was that they had no demand for pot still at all, that they never were asked for a pure pot still, that they did not keep it, and it was all for the mild blends, and their chief demand in some cases was for pure patent still spirit. Cambus seemed to be one of the things that they chiefly sold, and, as bearing on that, some of the witnesses bought it new and kept it themselves until it aged; others bought it old, and, of course, the price they gave varied. Some of the witnesses spoke of the great cost to them that Cambus was, and, so much so, that they sold it at 10d. a gill, obtaining quite a high price.

1019. Was your attention called to the evidence given here the day before yesterday by Mr. Tedder from the Inland Revenue?—Yes.

1020. Have you any observation to make as to the number which he gave of pot still distilleries and patent still distilleries?—I have no materials to enable me to do so.

1021. We have endeavoured to deal with the production and also the materials. What do you say as to the price that a retail dealer selling across the counter charges relatively for pot still whiskey and patent still whiskey?—The evidence does not enable me to form any view that can assist the Commission.

1022. If you have said anything with regard to it I do not think we should bind the distillers by it?—I have endeavoured to refresh my memory by perus-

ing a number of documents, but it is very difficult to carry it in one's head.

1023. I have worked out my own views as to what I think is important, and my colleagues will ask you anything that occurs to them. Is there anything else that you desire to call attention to?—There is one matter which I have not referred to which I should like to call attention to, and that is this: in relation to the arguments that were used on behalf of the prosecution, that patent still spirit was a silent spirit. The evidence given was this, that by "silent spirit" you meant something of which the actual origin could not be traced, that is to say, that it was an ethyl-alcohol pure and simple, a rectified spirit.

1024. And it told you nothing?—It told you nothing. The evidence that was given was this, that when rectified spirit was required, rectified spirit could not be obtained from the patent still, that it had to be put through a chemical process and re-distilled in order to separate the bye-products, and that owing to the greater facilities for manufacture the chief portion of the rectified spirit was obtained from the patent still distilled by this rectification process instead of, as formerly, it all being obtained from the pot still.

1025. (*Dr. G. S. Buchanan.*) You referred to the definition of whiskey which your clients wish to put forward. It depended, did it not, on the diastatic action of malt?—Undoubtedly.

1026. That was an essential part?—My recollection of the evidence is that they considered that that was an essential feature in whiskey production.

1027. And in the production of whiskey in patent stills just as much as others?—Yes, just as much in the patent still as in the pot still.

1028. Was any evidence given as to the smallest proportion of malt that is necessary to produce that diastatic conversion?—Yes. Evidence was given, I think, that not less than 15 per cent.—my memory is, I think, accurate on this—that not less than 10 or 15 per cent. was essential, but that it was desirable that it should not fall below 15 per cent., and that the practice was not to fall below 25. The evidence given as to the general constitution of the mashes was that the malt varied from 25 to 33 per cent. You occasionally had 25 per cent. malt and 75 per cent. maize, or 33 per cent. maize, 33 per cent. rye, and 33 per cent. malt.

1029. 75 per cent. of maize would be a usual proportion in many patent still distilleries?—No, the evidence given was that the normal was not more than 50 per cent. of maize, and that in Irish patent still distilleries the average was one-third, but in Scotland it did sometimes go as high as 75, but that was not the average.

1030. Was that given in any detail? Were there many cases in which maize was in as large proportion as 75?—No, that was given as an exceptional case. I think I shall be able to give you the evidence as to the normal. At page 236, question 2812, there was the evidence of Dr. Tatlock, who had a large experience. He was asked: "But you are not prepared to say that, with regard to the spirit, for instance, here, there is not 75 per cent. of maize used?—No chemist can tell that. If it was made in Scotland I should say there was not that; I should say it was nearly equal parts of maize, malt, and rye if it was made in Scotland." Then there was further evidence on that subject at page 254. This was with regard to Scotland. At question 3017, Mr. Calder was asked: "Can you tell me, first of all, your average constituents of the mash for the preparation of this patent still whiskey?—Well, we use from 35 to 37½ per cent. malt, about 30 per cent. of rye, and the balance in maize." Then I think I can give you the average in Ireland. Evidence was given by Mr. Andrew Watt, Chairman of the United Distilleries, Limited, comprising the Irish distilleries of Belfast and Derry, and he was asked at question 3312, "Can you give us what the mash was in the years 1870, 1871, and 1872"—that was the patent still—and his answer was: "About a third of malt, a third of maize, and a third of rye. I have the exact figures, but that is roughly speaking what it was.—Was the rye always used alone, or did you sometimes use any oats?—We sometimes used some oats. Is that about the average that has been used from the year 1870 up to the present time?—About the average.—I think the actual in 1906 is 27·7 malt, 36·1 maize, 36·2 oats?—That is so." That was in the certificate.

1031. In comparing the patent still and pot still process you told us that in the preliminary stage the results were the same up to the stage at which fermentation ceased in each case?—Yes.

1032. That, of course, is dependent, to some extent, on the materials used, is it not?—Of course, but the evidence given was this, that substantially, whatever you take, the result was practically the same, in this sense, that even if you take barley of different years, of different ripeness, of different age with the bye-products the infinitesimal amounts of bye-products varied even if you take only barley. The contention on behalf of the prosecution, as regards maize, was that there was an essential oil which was a characteristic of maize, and that that had some effect, but I think that was disposed of by the evidence of Sir James Dewar, and I daresay the technical witnesses will give you that. Sir James Dewar pointed out that that oil was one of the fixed oils which was not altered in any way by the process, and never passed over at all. Its boiling point I think he said was 500° or 600°. It went away with the spent wash.

1033. But it was not claimed by the defence that the actual worts in ordinary practice as used in a pot still and the actual worts as used in a patent still are identical?—Oh, no.

1034. With regard to the fractional distillation, you told us that the evidence of the defence was to the effect that the pot still process is essentially a fractional distillation process as also is the patent still?—Undoubtedly.

1035. Was any evidence given to show that by a combination of the fractions that were obtained from the patent still you could produce a product with the flavour and characteristics of the pot still?—There was no direct evidence on that point. It was pointed out that if you collected some of the products of the fusel oil trap and mixed the various proportions together that you would obtain a product which would have all those; that all the materials were there, and you could put them together, but I do not think there was any evidence given which would justify me in stating that.

1036. (*Dr. Horace T. Brown.*) Varying the position of the spirit plate?—Yes, if you did that you could draw off a mixture in such proportions as you wanted. There was evidence given to that effect.

1037. (*Dr. G. S. Buchanan.*) That is to say, the patent still could produce spirit of various chemical compositions?—Yes, undoubtedly. Whether you could get an identical proportion at any particular point of the patent still there was no evidence that I can safely rely upon to tell you as to whether you could get a thing containing the identical proportions.

1038. But was there evidence to show that it was commercially practicable to use the patent still by adjusting the spirit plate or otherwise to produce commercially an article with the flavours or characteristics of the pot still?—I do not think any evidence was given to that effect.

1039. If it was practicable no doubt it would be done in view of the greater cheapness of the patent still process?—The views of those I represented was that they did not want to make the body containing this. The public demand, according to their view, was for a spirit that did not contain so high a proportion, and they met that public want.

1040. But I understand the blenders as a rule require some pot still spirit as well as patent still spirit?—Of course, as I say, I have no personal knowledge of this, but the impression I gathered from the evidence of the blenders was this, that pot still was not added because it was wanted to make whiskey, but that pot still was added to patent still to produce a fluid containing a certain flavour which the public wanted, and that the marrying of the two flavours of the pot still and the patent still product produced a product which the public liked.

1041. But my point was, that if the patent still could be used to produce an article with these characteristic and estimable flavours that are wanted by the blender, and are now obtained by him from the pot still, it would be cheaper, and therefore the patent still would probably be used?—Yes, but again I am only venturing with deference to mention this—

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not from the evidence—a patent still, of course, is a more perfect separator than the pot still. It is a higher refinement of art, and, as I suggested in the Court below, I hardly thought that the Food and Drugs Act of 1875 had been passed to prohibit manufacturers from all use of subsequent inventions which enable them to better work their process.

1042. I gather, in defending the case, the primary object of the distillers was to protest against any decision that the addition or the use of, patent still spirit in blends would constitute an adulteration?—They put their case rather higher than that. What they said was this, that certainly blends were Scotch whiskey because you were mixing two different types of Scotch whiskey. But they put their case higher than that, they said there has been a large and continuous sale for certainly over 40 years of patent still spirit alone as Scotch whiskey, and that if patent still spirit alone has been sold and asked for and is Scotch whiskey *ex necessitate* the blend is.

1043. So that in the case of the Islington sample of Scotch whiskey, whether it contained 90 per cent. or 100 per cent. of patent still spirit, it would equally have been defended on the ground that it was Scotch whiskey?—Equally.

1044. Can you tell me anything with regard to the origin of the Islington samples? We were told yesterday by Mr. Bramall with regard to the sample of Scotch whiskey of Davidge that Davidge had bought the spirit from Messrs. Stevens, Buer, and Co., and that the spirit sold by Stevens, Buer, and Co. was a mixture made by themselves. They obtained grain spirit from the North of Scotland Distillery, and pot still spirit from Paisley. 1s. 1½d. a gallon was paid to the North of Scotland Distilleries for the patent still spirit, and that was for spirit at proof. Stevens, Buer, and Co. watered this down to 33 under proof; the cost was 10½d. The grain spirit was six months old at the time it was sold to Davidge. It was sold as "grain aqua," it was distilled from 25 per cent. of malt and 75 per cent. of Indian corn. I think that was admitted?—I think the information you have here which Mr. Bramall gave was obtained from evidence given on behalf of the defence.

1045. I want to know how the exact origin of that particular grain aqua was traced?—It was traced right through. It was all proved before the learned magistrate. There was no fresh evidence given on that matter before the Quarter Sessions, but it was proved strictly before the learned magistrates. It was traced down from the marks on the cask until it was brought right back to the distillery.

1046. Evidence was given about it?—Evidence was given before the learned magistrate.

1047. It was not merely a statement?—No evidence was given before the learned magistrate tracing it down from the marks and invoices, but it was taken before Quarter Sessions as a statement in order to avoid calling a lot of witnesses.

1048. The Scotch whiskey in question was sold to the public at, I think, 15s. a gallon after dilution to 33 under proof?—I have not considered the question of price.

1049. I want to know whether evidence was given about one question of price, and that is with reference to the charge that was made to Stevens, Buer, and Co. by the Distillers Company. It is worked out here as 10½d. for the gallon of whiskey that was sold in Islington. Was any statement made as to the profit made by the Distillers Company out of that 10½d.?—I have no recollection.

1050. You do not know how much of that 10½d. was the cost of manufacture?—I have not considered this question, but my recollection at this period is, that the cost came up, I think, to 8½d. or 9d. I think that was the actual net cost of manufacture, but I have not addressed my mind to the question of price at all.

1051. (*Dr. Horace T. Brown.*) Your broad contention is, that the product of the patent still is as much entitled to the generic term "whiskey" as the product of the pot still?—Absolutely.

1052. And also that the manufacturer ought to have wide latitude in selecting the particular mode of producing whiskey both as regards the distilling apparatus which he uses and his choice of materials?—Undoubtedly.

1053. Do you happen to know of any similar case in which for the purpose of the Food and Drugs Act a rigid definition has been made of a manufactured article, for which there are alternative methods of manufacture, and wide latitude in the choice of materials used?—Personally I know of none, and I suggested in both Courts that it was an unheard of thing to attempt, under the Food and Drugs Act, to define by a process of manufacture and by one set of materials an offence under the Food and Drugs Act.

1054. (*Chairman.*) What do you mean by "one set of materials"?—Malt or barley or wheat.

1055. (*Dr. Horace T. Brown.*) There is no similar case?—I know of none.

1056. There is the brandy case?—Yes, the brandy case is analogous to this case. Our case was, that whiskey is a spirit distilled from grain, that brandy is a spirit distilled from the grape, and in that sense, of course, we say that it is an exactly analogous case as regards whiskey and brandy. My recollection is that evidence was given that champagne, port, and sherry were all entitled to be called wine, and that sherries varied amongst themselves, and champagnes varied amongst themselves, and if you went to a shop and asked for claret and got an ordinary Medoc, you could not complain you did not get Lafitte.

1057. But with regard to that definition of brandy there was no limitation of the distilling apparatus to be used?—None that I know of.

1058. There was nothing about a pot still?—None that I know of.

1059. You also contended, did you not, that in 1875, when the Food and Drugs Act came into force, there was already a large and recognised trade in the patent still grain product as whiskey?—Yes, that was the evidence given.

1060. Did you also contend that the patent still spirit contained the same kind of bye-products as the pot still?—The evidence was that the kinds were identical, but that the only thing that they differed in was in their proportions, and that in some cases furfural was eliminated from the product of the patent still, in other cases it was present, but that substantially all the products were identical though their proportions were considerably less.

1061. It was a difference of degree and not of kind?—It was a difference of degree and not of kind. That was the evidence led on behalf of the defence.

1062. Then to come to the question of standard, which is quite separate and distinct from that of definition, the standard was 380 parts per 100,000 of absolute alcohol?—That was the suggested standard.

1063. Are there any pot still whiskies which do not reach this standard?—Yes. Evidence was given to that effect. There was evidence given that as regards Campbeltowns the total impurities per 100,000 of absolute alcohol varied from a minimum of 201 to a maximum of 510, giving an average of impurities of 335; that the Islays varied from a minimum of 260 to a maximum of 337, giving an average of 294; that the Highlands varied from a minimum of 223 to a maximum of 431, with an average of 292; that the Lowlands varied from a minimum of 165 to a maximum of 350, giving an average of 255; and that the Grains varied from a minimum of 63 to a maximum of 191, giving an average of 120.

1064. Could you give the reference to that?—That was given in the evidence called before the Police Court, and it was a printed document which was handed in. I have no doubt you will be able to be supplied with that. It was part of the evidence given by Sir James Dewar.

1065. Then there are samples of Campbeltowns, Islays, Highlands, and Lowlands which would not have passed the standard?—Yes, that was one of the contentions.

1066. I presume the numbers are obtained by the same process of analysis as they adopted?—That I do not know. These are comparative ones. I doubt whether they are to the same standard. I think there was a standard by the Allen-Marquardt, and there was another test. These figures I have given you are all comparisons on the same table, but whether they are

the same by the colorimetric method, by which I think Dr. Teed analysed it, I cannot be certain.

1067. Can you give me the reference to that?—I will see that you are supplied with it.

1068. In contrasting the work of the pot and patent still there is one point to which you did not refer, but which has been made a good deal of by the pot distillers, as far as I understand. Do not the pot distillers make a great point of the fact that whereas the bye-products are to a great extent separated and actually removed from the patent still, these bye-products, in the case of the pot still, are returned into the low wines, and that no removal of products takes place?—I am obliged to you for calling my attention to that, because the evidence, as you have said, that was given by Dr. Teed was that you returned to the low wines, in the case of the pot still, the feints and the foreshotts, that they were then re-distilled, and eventually occurred in the whiskey. As was pointed out in the evidence on behalf of the defence nothing of the kind took place. On every fresh distillation you again separated feints and foreshotts, and you only collected as whiskey the intermediate product in each case, and, further—I do not know whether it is shown on this model, but in the actual working of a patent still it is so—the feints are returned in precisely the same way to the top of the analyser; the feints are actually pumped back to the top of the analyser; and are again subjected to steam as it passes up to the analyser as in the case of the pot still.

1069. That does not go on continuously, does it? There is a removal of products in the lower vessel?—Undoubtedly there is a trap.

1070. There is no such removal in the case of a pot still?—No. In the evidence that was given it was endeavoured to be suggested that fusel oil was an article that became known after the advent of the patent still. Sir James Dewar pointed out that fusel oil had been explained and analysed and described in 1825, long before the advent of the patent still at all, and he pointed out that there was no more truth in the suggestion that as such the bye-products—the feints and the foreshotts—in the pot still passed into whiskey than there was in saying that they came in in the patent still.

1071. There surely must be some means of removal in the pot still distillation, otherwise we should have a concentration going on, and the distillation would come to an end?—What was pointed out was that the larger portion of the higher alcohols go away in the spent wash and in the spent lees. They go down the drain. That was the evidence given. Instead of collecting them, as by the more perfect apparatus you can, the pot still distillers, I believe, sent them down the drain in the spent lees and the spent wash.

1072. So you contend there is no great importance in that difference?—That was the contention and the evidence which was led on behalf of the defence.

1073. (*Dr. Adeney.*) I am not certain whether I quite understand the evidence you have given as to the relative proportions of the secondary products. Is the total amount of secondary products in proportion to the ethers and alcohols?—Yes. The actual standard taken was the number of parts per 100,000 of absolute alcohol.

1074. As to the total quantity of secondary products?—As to the total quantity of secondary products per 100,000 of absolute alcohol in the whiskey.

1075. Could you tell us whether the proportions of the different families of compounds comprising the secondary products are similar in the case of the patent still product and the pot still product?—The evidence given was that the families resided in both spirits.

1076. In similar proportions?—I am not quite certain. I do not like to tax my memory as to whether or not that was gone into. I know there were questions, but I think I can put it in this way: there was evidence that *inter se* amongst pot stills the proportion of each family varied very largely, and that there was a similar variation that took place with regard to the patent still, but that though the families might be smaller the families were all represented in the patent still.

1077. Coming to the cost of materials, you told us there was practically nothing, so far as the cost was concerned, in the use of maize?—No.

1078. Do you refer simply to the weight of maize used in a mash?—No; the evidence was directed rather to the total cost of the materials used for the preparation of the mash, and I think it was in evidence that it varied in one case, I think the variation was a penny or something of that kind. But substantially the effect of the evidence on my mind was that though at times one grain might be cheaper than another, yet, taking it all in all, substantially the cost might be taken to be the same.

1079. What I wanted to get at was this, in the calculation of cost did they take into account any difference of yield of spirit from the maize?—I am not certain that there was any evidence with regard to that point.

1080. The cost was returned at per proof gallon of product?—I do not remember whether there was evidence. I would rather you asked some technical witness with regard to that point. My memory is not accurate with regard to that.

1081. You told us that patent still spirit is put on to the market in an unblended condition?—The evidence was, in very large quantities.

1082. Can you tell us whether the product from the use of maize and distillation of the patent still is ever put on the market?—That is the product that is put on the market. The product of the distillation of malted barley, maize, with or without rye—that and that alone is the product that is put on the market and has for forty years been sold as whiskey.

1083. (*Mr. J. Y. Buchanan.*) You have told us that in Scotland they take the patent still whiskey and sell it largely unmixed with pot still, and that the taste apparently is growing there for patent still whiskey?—Yes.

1084. Do they take the spirit from the Coffey stills where there is a minimum of bye-products for that purpose?—If I may put it in another way, they take it where there is a maximum of ethyl-alcohol.

1085. In proportion to the other bodies?—In proportion to the other bodies. You take it at that point where in the process of condensation there is the major proportion of ethyl-alcohol. In addition to that there was evidence to the effect that anything that condenses above can follow down to the spirit plate, that in the upper part where the feints go off I think there is a means by which from the upper plates of the rectifier the spirit can fall down so that anything that is condensed above all comes down to the spirit plate.

1086. Am I right in concluding that amongst the Scotch distillers the view held is that the public taste is tending more and more towards the pure alcohol?—To purer alcohol undoubtedly, that is to say, the evidence was that the demand was for a less highly flavoured product.

1087. And that it may be presumed possibly that the taste would go in the direction of having pure ethyl-alcohol?—There was no evidence given to that effect.

1088. (*Dr. Bradford.*) You are not prepared to give any evidence on the health question, I understand?—No, except in so far as there was evidence given.

1089. Is there anything you wish to state on that subject?—The evidence given on that point was this: one doctor was called on behalf of the prosecution who said that in his view pot still whiskey was better than patent still. On the other side Dr. Andrew Luff, whose evidence you will find on page 300, and who was the Examiner in Public Health, and one of the scientific experts of the Home Office, said he preferred the patent still largely because of its smaller proportion of furfural, which he objected to owing to its strong toxic effect.

1090. You are not prepared to give us any evidence with regard to the toxic action of the bye-products or of the alcohol?—No, except that there was this evidence: Dr. Tatlock took three gallons of patent still spirit and three gallons of pot still spirit, and he extracted from those the whole of the bye-products from each of them, and on alternate weeks he dosed himself with the neat bye-products extracted, and in neither case did he find that he suffered any ill-effects at all. Dr. Tatlock was told to investigate this ques-

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tion on behalf of the Corporation of Glasgow some years ago, and his investigation led him to believe that all the ills which were attributed to patent still spirit depended not upon quality but upon quantity, and that the gentlemen who complained of the patent still spirit had imbibed too freely, and that it was nothing to do with the patent spirit, but was due to their over-large doses of medicine. Sir James Dewar gave evidence that for thirty years he had used this patent still spirit in his house in health and sickness, and that his friends for those thirty years had had it, and that neither he nor they had ever suffered from the slightest ill-effects from what they had taken.

1091. Have you any evidence to give with reference to the influence of age on the asserted ill-effects of patent still spirit?—A great many of the witnesses who were called considered that patent still spirit was much better when it matured with age in the same way as pot still. A great many of the vendors who were called said that they would sell patent still spirit, only old, the same as they would sell pot still spirit only old.

1092. Which did you say matured earlier?—The evidence, I think, tended to show that the patent still matured earlier.

1093. You have given evidence pointing to the conclusion that patent still spirit is capable of maturing?—Yes, there was evidence given that it matured, and that the nature of the maturing process was the same.

1094. It has been asserted that it could not be matured?—Yes, but there was a large body of evidence that the maturing of patent still spirit was of the same character as the pot still spirit.

1095. (*Mr. Guillemard.*) I should like to ask you a question about your definition of whiskey. You said it was a spirit produced by distillation from a mash of cereal grains saccharised by the diastase of malt. By "cereals" do you mean necessarily cereals grown or growable in this country—England, Scotland, or Ireland?—I think not. The evidence was that imported barley was just as much used as home barley. There was some evidence that maize could be, and had been, grown in the south of Ireland, but I do not think that on behalf of my clients there was any suggestion that the country of origin had anything to do with the nature of the grain.

1096. As distinguished from the place of manufacture?—As distinguished from the place of manufacture.

1097. It would not take away the character of Scotch whiskey that the barley had been brought from another country into Scotland and distilled there?—No. The two important features that were accentuated by the evidence as regards the country were: one, the water, which everybody agreed—the pot still manufacturers and the patent still manufacturers agreed—was a question of the greatest importance, and, secondly, the surroundings.

1098. That is all place of manufacture?—Yes. There was evidence—I forget whether it was given before the Quarter Sessions or in the Police Court—that where there was a desire on the part of two patent still distillers, one on one side of the water-shed and the other on the other side of the water-shed, to reproduce the peculiar characteristics of the whiskey that was obtained from one patent still and try if they could make their mashes the same, they were never able to obtain the same special flavour as they were not using the same water and the surroundings of the district were different.

1099. Then with regard to the point touched upon by the Chairman, what exactly do you include in cereals? He asked about rice, and I think you were doubtful?—I have no personal knowledge, and there was no evidence given that rice had ever been used.

1100. Rice you are a little doubtful about. Then with regard to potatoes and molasses. Would you be quite clear about that?—Absolutely clear that whiskey cannot be made from potatoes or molasses.

1101. Of course, there is a spirit that is extracted solely from potatoes or molasses, and it might be used for blending with whiskey by some people?—Yes, I have heard some statement to that effect, but no evidence was ever given in either of the Courts below with regard to that.

1102. I am not saying that that was done by your clients?—But there was no evidence that anybody had ever done it.

1103. That it was even blended with whiskey?—No. I have carefully looked through the evidence and I can find no evidence. There have been statements made galore, but I can find no evidence that whiskey has even been made by that blending—not in the proceedings that I have been concerned in. Other proceedings I, of course, know nothing about, but as far as the proceedings before the learned Magistrate in this prosecution are concerned no evidence that I can find was ever brought forward that whiskey was ever made from that. There were plenty of statements but no evidence.

1104. So far as your clients were concerned they would hold, would they not, that even the addition of a small proportion of spirit from other than the cereals, say, from rice, would exclude the product from the definition of whiskey?—As I understand their proposition they say that nothing should enter into whiskey except the spirit obtained from the distillation of cereals.

1105. In a pot or patent still?—In a pot or patent still.

1106. Even in a small proportion?—There is evidence with regard to that, but that was the position, as I have indicated.

1107. What exactly does the authority for your definition rest on? Is it merely a matter of history?—A matter of history entirely and practice, that is to say, that what has been known as Scotch whiskey and Irish whiskey has been so made.

1108. There are no allegations made on behalf of your clients that the addition of such a spirit made from materials other than cereals, if it were used in blending, would be injurious to health?—No, none at all.

1109. You do not wish to allege it?—No. I am here only to tell you what took place in the Police Court and at Quarter Sessions. I have no personal knowledge of these matters except in a general way.

1110. Of course, you really only speak for your clients, and with regard to the evidence given in the cases you have been concerned in?—Exactly.

1111. Do you happen to know whether there is any important branch of the whiskey trade which would quarrel with that definition of yours on the ground that it excluded materials other than cereals?—I know of none.

1112. That means that, as far as you are concerned, they have not been vocal?—They have not been brought to my intelligence.

1113. (*Chairman.*) Not at your consultations?—No, I know of none.

1114. (*Mr. Guillemard.*) There would not be a section of the whiskey trade that would come to us here and say, "Well, we cannot take Mr. Walter as representing us at all, we want to include in the term 'whiskey' a product that has a proportionate part of the spirit not made from cereals"?—I was only instructed on behalf of the Scotch and Irish patent still distilleries, and the views I have told you are the views that we enunciated in both Courts, and which we have no desire to recede from.

1115. You do not know of any one in the trade who would say what I have suggested to you?—I know of no one.

The witness withdrew.

Mr. Arthur Mellor Bramall, recalled.

Mr. A. M. Bramall.

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1116. (*Chairman.*) You have been in the room while Mr. Walter has been giving his evidence?—Yes.

1117. You have followed what Mr. Walter has said?—Yes.

1118. Are there any specific matters of fact which you in any way differ from in the statement of Mr. Walter?—There are one or two minor points, and perhaps I may refer to them while Mr. Walter is here. The last mistake I think my friend made was this, that he said that the whole of the feints, as he called them, in the patent still were sent back into the patent still. I think you heard from Mr. Tedder, and it certainly is the fact as I am told, that the fusel oil is skimmed off and sold as a bye-product. If you remember, Mr. Tedder said it fetched a very much higher price than the so-called whiskey. I think he said it fetched 5s. a gallon. Mr. Walter, I think, made a mistake in saying that all went back into the analyser column.

1119. (*Mr. Walter.*) No, I did not say it all went back.—(*The Witness.*) In the pot still the feints and the foreshotts and the tailings all go back. There is nothing taken away, and there is one distinction between the two stills, that in the one case the fusel oil is skimmed off and sold as a separate product and in the other case everything is returned to the still. Whether it be right or not I cannot say, but Dr. Teed said in his evidence he had analysed the spent wash and the spent lees and could find no trace of the higher alcohols in them.

1120. (*Mr. Guillemard.*) Which spent wash are you referring to?—In the pot still. My friend Mr. Walter said these things were ejected in the spent wash and spent lees. I think Dr. Teed said he analysed the spent wash and the spent lees and could find no trace of these things in them, and therefore he thought, rightly or wrongly, they did not go out into the drain in the spent wash and the spent lees. Then my friend made a mistake when he said that methyl-alcohol was one of the higher alcohols that came over. I do not think that methyl-alcohol does. It is not in the list of the higher alcohols that one finds in the text books.

(*Dr. Adeney.*) There is no methyl-alcohol.

1121. (*Dr. Horace T. Brown.*) Besides, if so, it is not one of the higher alcohols?—I looked it up while Mr. Walter was giving evidence, and I did not find it in the list. Then there is another point on which I think Mr. Walter's memory was a little at fault. I think I was right yesterday when I said that before the learned Police Magistrate there was a very strong objection on the part of his clients to stating whether it was patent still spirit or not on the label, but when we got to Quarter Sessions that objection had to be modified, and, as Mr. Walter said, they were willing to state that this was a blend of patent still and pot still, but they did very strongly object to giving the proportions.

1122. (*Chairman.*) And that is so now, I suppose?—I imagine so from what my friend says. Then as regards Irish pot still distilleries, Mr. Walter said that sometimes a third still was used. I think I am right in saying there are always three stills in Irish distilleries, but that the whole of the product of the first still does not go into the second one; it goes from the first to the third. The strong low wines go into the third still and the weak low wines go into the second still before they are passed into the third; but practically the Irish principle is one of three successive pot stills. I do not think there is anything else that I can suggest. One feels a little tempted to argue with some of Mr. Walter's propositions.

1123. (*Chairman.*) You will restrain that. Now, Mr. Walter, do you care for any reply?—(*Mr. Walter.*) No, my Lord. If I mentioned methyl it was a mistake. I quite agree methyl is not a higher alcohol. I did not know I had included methyl. I do not think there is anything else that I can add.

(*Mr. Bramall.*) Mr. Walter read two answers from the evidence as to the cost of coal and then as to the cost of labour, but if you look at the next answer, the witness (it was his own witness) summed it up by saying the cost of the pot still is enormously greater.

1124. (*Chairman.*) Is this the question you refer to—No. 3090. "The total cost, materials, labour, coal, establishment charges, and the various other items going to make up the total cost per gallon, is it dearer or cheaper to make a proof gallon of the pot still or a proof gallon of the patent still?—Enormously more in the case of the pot owing to the small make and the enormous charges in proportion"?—(*Mr. Bramall.*) Yes, that is so. That is how my friend's own witness sums it up.

(*Chairman.*) Then the Chairman says, "Enormously more to make a gallon of pot than a gallon of patent?—Than a gallon of patent."

The witness withdrew.

Adjourned for a short time.

Dr. William Murrell, called.

Dr. W. Murrell.

1125. (*Dr. G. S. Buchanan.*) You are in practice as a physician in London, are you not?—I am.

1126. You are a Doctor of Medicine and a Fellow of the Royal College of Physicians of London?—Yes.

1127. And physician to the Westminster Hospital?—Yes.

1128. You are Lecturer there on Medicine and on Clinical Medicine?—Yes.

1129. You are Examiner at the University of Aberdeen, and were for many years Examiner elsewhere?—Yes.

1130. You have written several books and articles on the action of drugs, including alcohol?—That is so.

1131. The use of whiskey in medical practice in this country as a alcoholic stimulant has considerably increased during the last 20 years, has it not?—Yes, that is so, both in hospitals and in private practice.

1132. Are you speaking of the increase of whiskey prescribed as a beverage by medical orders—that is to say, for dietetic use—or are you speaking of the use of whiskey for the specific treatment of diseases—acute diseases?—Of both—both as a dietetic agent and as a remedial agent in the treatment of disease.

1133. The principal increase, I take it, is for dietetic purposes?—I think that is so.

1134. So far as it has been the medical practice to recommend whiskey in preference to other stimulants it has been for general dietetic use?—Yes.

1135. You refer in your *précis* to its use in specific disorders, such as influenza, typhoid or enteric fever, and in cases of acute pneumonia. Could you say something about its use there?—It is not used as a medical agent in this condition, but in the course of these fevers there is often the difficulty of collapse—that is to say, there is failure of the heart's action and of the pulse, and in these cases it is most desirable to give a quickly diffusible stimulant.

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1136. Can you say anything about its beneficial effects in so far as they relate to the alcohol on the one side or to the bye-products on the other?—I think the bye-products are extremely useful in these things, and that alcohol itself is of comparatively little value.

1137. You are speaking now of acute conditions, such as the specific fevers that you mentioned?—Yes, the acute specific diseases, including pneumonia.

1138. Will the rectified spirit of the Pharmacopœia have a useful effect?—The rectified spirit of the Pharmacopœia would be useless in these cases. I have made some experiments on this point recently during the last two years—and by experiments I mean clinical observations on patients suffering from these various diseases—and I have found that rectified spirit has comparatively little action, and that after the failure of the rectified spirit, whiskey—and by that I mean pot still whiskey—has proved beneficial.

1139. You give an instance of the custom of prescribing whiskey to be taken at bed-time in cases of insomnia for the purpose of inducing sleep, practically to the exclusion of brandy and other forms of spirit. What would you say there with regard to the difference between using whiskey on the one hand and rectified spirit on the other?—The whiskey would be useful. The rectified spirit would have comparatively little value, and I would add to that that I consider that the pot still whiskey is much more useful than the patent still whiskey for that purpose.

1140. Then you speak of whiskey being constantly recommended by the medical profession for patients, especially those advanced in years who suffer from dyspeptic, gouty, and debilitated conditions generally, due to impaired digestion, enfeebled heart weakness, and slowness of the circulation. Would you tell the Commission what you consider about whiskey in these cases?—Whiskey is very useful in these cases, and it is then prescribed for gouty people for whom wines, and especially strong wines, would be unsuitable.

1141. They would be unsuitable for what reason?—I believe because the patient may be gouty, and it might bring on an acute attack of gout, at all events it would intensify the condition we know as goutiness.

1142. Do you prefer any one kind of whiskey for that purpose?—The pot still whiskey.

1143. Is that on account of its being better appreciated from the point of view of taste and flavour, and having what I may call better dietetic value?—Not only that, but it is more easily absorbed, and you get a better and a greater dilatation of the blood vessels.

1144. Do you wish to say anything with regard to age in relation to the character of pot still whiskey?—I say that pot still whiskey improves very much by keeping, and the older it is, within certain limits, the more valuable it is from the medicinal point of view.

1145. What do you wish to tell us with regard to raw pot still whiskey?—I should say that it is quite unsuited for medicinal use, and I should think very few people would care to take it even as a beverage.

1146. On the other hand, with regard to the matured pot still whiskey?—The matured pot still whiskey would be very valuable indeed in these cases.

1147. Both for dietetic use and specific use?—Yes, both.

1148. Then you have some objection, have you not, to the practice of mixing new pot still whiskey with silent spirit and selling it as whiskey?—Yes, the patent still whiskey would do no good, and it would simply dilute the pot still whiskey, so that it would be less efficacious.

1149. Your meaning there is that, if the new pot still whiskey contains deleterious products, although you dilute it by adding the silent spirit, some of the deleterious products would still be present?—They would be present, and the addition of patent still whiskey would not get rid of those deleterious products.

1150. But they would be present in less proportion?—Yes, quite so.

1151. Is your contention that the use of silent spirit enables new pot still whiskey to be drunk which would otherwise be out of the question?—I will not go quite so far as to say that.

1152. You have a large experience, have you not, in a number of cases in which you have known whiskey to be administered which has not produced the result on the patient which you expected?—Yes, that is so. I have a consulting practice to a considerable extent in the suburbs of London. I often see patients who require a stimulant, and I find that they have taken whiskey, or a so-called whiskey, which has done them no good, and on inquiry into the nature of the whiskey taken, I find that it is a patent still whiskey. Then the suggestion is made that a pot still whiskey should be substituted for this, and there has been an immediate improvement in the condition of the patient.

1153. By a patent still whiskey in that connection, do you mean a blended whiskey?—I should say a blended whiskey, but with a great deal of the silent spirit in it.

1154. By what means have you ascertained in cases of this kind the nature of the whiskey that was contained in the bottles that were used?—The composition of certain brands is perfectly well known. A statement as to their composition was given at the hearing of the whiskey case at the Police Court. I know partly from that.

1155. Can you give us any concrete instance where you had whiskey which you were dissatisfied with because it did not produce the effect you desired on the patient?—I think we may take it that most of the whiskey sold at the smaller public-houses in the neighbourhood of London—and many of these patients get their whiskey from there—is a patent still whiskey, and not a pot still whiskey. It is comparatively rare, I should say, to get a cheap whiskey which is a good pot still whiskey.

1156. Then was it only an assumption in that case in the case you spoke of, where you were dissatisfied with the effect of the whiskey. It was an assumption that it was patent still whiskey?—To some extent, but that has been confirmed by a very fair amount of experience, not only by myself, but by other people whose attention has been called to the fact.

1157. Then in substituting pot still whiskey, you have no hesitation in saying what pot still whiskey should be purchased?—Yes, the pot still whiskies are fairly well known.

1158. I think you gave evidence, did you not, in support of the prosecution in the Islington case, that has been referred to?—Yes, I appeared in the case both at the Police Court and on the Appeal.

1159. You desire, I think, to give a personal opinion in favour of the definitions of Scotch and Irish whiskey, which have been put forward to us already by Mr. Bramall?—Yes, I confirm that entirely.

1160. Do you wish to expand that in any way?—No, I think not.

1161. Then with regard to the bye-products of whiskey, if they were separated from the whiskey and taken neat, could you say anything about their toxic effect?—If they were taken neat, they would probably exert some toxic action, but in the small proportion in which they are found in the pot still whiskies, so far from exerting any toxic action, they exert a beneficial action.

1162. You mean in matured whiskey?—Yes, in matured whiskey.

1163. Have you anything to say with regard to the spirits made from damaged maize?—Yes. There is a disease known as pellagra, which is met with in certain parts of the Continent, and this is said to be the product produced by the use of bread made with damaged Indian corn. As we know that damaged Indian corn is used, or may be used, in the production of silent spirit, I suggest that possibly pellagra might arise from this cause, although I have no evidence of any cases having so arisen. It is a mere suggestion which I do not wish to push.

1164. Is pellagra a disease which is associated with any micro-organism acting on the maize?—I do not know that it is. I do not think it has been well worked out, but the symptoms are perfectly defined.

1165. Having been produced from damaged maize, would any toxine which would be capable of producing pellagra come over in the process of distillation?—I am afraid that is a question I cannot answer.

1166. Dr. Pavy made a report to the Parliamentary Committee of 1891 in which he referred to patent still whiskey as having nothing of the character of whiskey about it. You wish to confirm that, do you not?—Yes, I agree entirely with the quotation from the Blue Book.

1167. There is something else in your *précis* on page 5 after that quotation, is there not? Do you wish to go into that?—Yes, I think I might say a few words on that. I think it is the bye-products in the pot still whiskey that do much of the good as a stimulant. I think that they dilate the blood vessels and stimulate the heart's action. Now these bye-products, whatever they may be, are absent in silent whiskey—in patent still whiskey—and in that respect I contend that the patent still whiskey is inferior as a medicinal agent to pot still whiskey.

1168. You are speaking now of the medicinal effect as apart from mere dietetic value?—Yes, chiefly from the medicinal point of view.

1169. There is one other point I notice that you wish to bring before us with regard to the amount of alcohol that a man may take as the result of drinking silent spirit on the one hand and pot still on the other?—I should say that if a man requiring a stimulant took a glass of pot still whiskey he would be satisfied, he would go away rejoicing; but if he took a glass of silent spirit—patent still whiskey—he would not find that he got very much better from it; he would stand round the bar and would take another, and then another, and then another, and it would do him harm.

1170. You wish to draw our attention to a definition of whiskey, I think?—Yes. That is the definition of whiskey given by Chittenden, I think. This is given in the American Journal of the Medical Sciences, 1896, Volume I. It is from the second annual report of the New York State Board of Health. Chittenden defines whiskey as "a diluted alcohol with a peculiar flavour or aroma due to the raw material employed in its manufacture and developed during the fermentation, distillation, and ageing of the liquor." I do not know that that is a very good definition, but I thought possibly it was a definition which might be called to the attention of the Commission.

1171. You are familiar with the literature on this subject, and can refer the Commission to the books and various authorities. Have you any list of the kind of references that you wish to hand in?—Yes. I might perhaps be allowed to read an extract from a book in the first place. Perhaps I might be allowed to put in Wood's Therapeutics, in which you will see that whiskey is referred to as a cardiac stimulant. It has been stated sometimes that whiskey is not a cardiac stimulant, but simply a depressant. There, in that book, which is a recognised authority, whiskey is put under the head of "cardiac stimulants," and not under the head of "cardiac depressants," which occupy another and subsequent group.

1172. I do not wish to take up your time by asking you to read a large series of extracts, but it may be convenient if you could give the Commission a list of references and extracts from these volumes?—Yes. I have here a list, and I have a number of extracts from different authorities, but I regret to say that I have not a copy of them with me.

1173. You could let us have them later?—Yes; certainly.

1174. You have referred in your *précis*, and in the evidence which you have given just now, to "silent spirit" as the equivalent of patent still whiskey, or what is called patent still whiskey, or patent still spirit, or grain spirit?—Yes.

1175. Do you regard patent still spirit as the equivalent of silent spirit?—Yes; certainly.

1176. We have heard this morning from other sources that this is not recognised by a large number of chemists and distillers, and others, and it is claimed that there are a considerable proportion of bye-products in the patent still or grain spirit. You are aware of that?—No, I was not aware of that. I should have said there were none, or at all events, very few. I should have thought the proportion was small.

1177. Is there anything else on your *précis* that you wish to bring before us?—No, I think there is nothing else.

1178. (*Dr. Bradford.*) You state in your evidence that for 20 years or so whiskey has almost entirely replaced brandy in medical practice in this country as an alcoholic stimulant. Would you kindly tell the Commission on what that statement is based? Are you alluding to hospital practice, or to what are you alluding?—I allude both to hospital practice and to private practice. I should have said that 25 years ago brandy was almost the universal drink—it was the common practice for a man to call for a brandy and soda.

1179. This, as I understood you, was in medical practice?—If you will allow me I will go on to that point, and say also that in medical practice it was the custom to prescribe brandy when one required a diffusible stimulant. Then a difficulty was experienced in getting good brandy—all the old brandy was gone, and it could not be replaced. Then medical men thought they could get better value for their money by prescribing whiskey, and for a very long time whiskey was prescribed almost to the exclusion of brandy; but during the last 18 months, brandy has been more largely used again—possibly because there was an accumulation of better brandy, and possibly because brandy has been more largely advertised and samples have been sent to medical men.

1180. You are a hospital physician, are you not?—Yes.

1181. Would you tell me what, in your opinion, are the usual stimulants used in hospital practice, we will say in cases of severe illness?—At the Westminster Hospital, to which I am one of the physicians, and have charge of the wards, I prescribe as a stimulant whiskey almost exclusively, and brandy very rarely indeed, but I think it is possible that surgeons use brandy as a stimulant rather more than physicians do.

1182. Would you say from your experience as a hospital physician that it was the common practice of English hospital physicians to use whiskey in preference to brandy and champagne as a stimulant in acute disease in the hospital wards?—I think champagne may be put out of court. We do not use champagne except in very rare cases indeed, and only in those exceptional cases where some governor of the hospital is good enough to send us a supply; but comparing whiskey and brandy I should say now, and it has been the case for some years past, that whiskey is prescribed more largely than brandy.

1183. As a stimulant in acute disease in the class of cases one sees in the hospital ward?—Say in pneumonia, typhoid fever, and so on.

1184. That is your experience?—Yes.

1185. You think that whiskey is used in a similar way, but to a greater extent than brandy as a remedial agent in various other acute diseases—influenza, and so on, which you have mentioned?—Yes.

1186. I suppose you would admit that brandy is used to a large extent for these purposes?—Certainly, and probably the custom varies at different hospitals.

1187. It might be that your experience is exceptional as regards the prevalence of the use of whiskey?—I do not think it is.

1188. Turning to the *précis* of your evidence, I see you state that the beneficial effects of the stimulant employed are not due so much to the alcohol as to the bye-products, especially the ethers?—To the ethers which are diffusible sometimes and act rapidly.

1189. Could you give the Commission any sort of indication as to the facts, and the kind of evidence on which that statement is based?—I think the evidence would be this, that if one gives a pot still whiskey which we know to contain these etheral matters we get a more rapid action so far as we can see clinically than if we give merely rectified spirit.

1190. In other words, you think it is a matter for clinical experience and observation?—Yes.

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1191. Is there any other kind of evidence that you can put before us than that?—No, I do not know of any pharmacological evidence on that point.

1192. Now, as to the stimulant. The British Pharmacopœia recognises certain stimulants, does it not, as official?—Yes, there are various forms, or, rather, various percentages, of alcohol.

1193. Would you tell the Commission what forms of alcohol are recognised in the Pharmacopœia as official?—There is an absolute alcohol which may be put out of Court, because we do not use that. Then there is a rectified spirit which is 90 per cent. of alcohol. Then after that we have a 65 or 60 per cent., a 45, a 35 and a 20, or something of that kind, the lower grades being used chiefly in making different tinctures, and so on.

1194. Is brandy recognised by the Pharmacopœia?—Yes, brandy is in the Pharmacopœia.

1195. And whiskies?—No, not in the English Pharmacopœia—in the American.

1196. So that the Commission may take it that brandy is recognised, as one may say, as an official remedial agent?—Undoubtedly.

1197. Whiskey is not?—Not in the English Pharmacopœia.

1198. But sherry is?—Yes, sherry is.

1199. That, of course, is not a matter with which we are concerned. You, in your opinion, think that whiskey is of more value than brandy in many cases, and that possibly that is a defect in the Pharmacopœia that may be remedied in the future?—I think that if we could get a good brandy it might even be better than the whiskey; but I doubt if one could get a good supply of real old brandy at a reasonable price.

1200. You state that silent spirit in this connection is also useless. Are there not some preparations in the Pharmacopœia which contain silent spirit which may be, or are sometimes prescribed by doctors as diffusible spirits?—What preparation do you refer to?

1201. I was thinking of sal volatile, for example?—Yes, but then you have other constituents in that, and the stimulating action is not due to the spirit alone.

1202. Your point is that the spirit *qua* spirit is of little value?—Quite so in that preparation.

1203. To go back—in a potable spirit, whiskey, brandy, or whatever it may be, the alcohol *qua* alcohol is of little value?—Quite so.

1204. I may take it that that is your opinion?—Yes, that is so—that the alcohol is of comparatively little value.

1205. I want to be quite clear on the matter. The beneficial effect of the so-called diffusible spirits in the treatment of acute disease is, in your opinion, not to be attributed to the alcohol, but to certain other constituents?—Yes, which we may call bye-products.

1206. I may take it that that is your answer?—Yes.

1207. Then you state that whiskey is largely used by the medical profession in the treatment of insomnia?—Yes.

1208. That you deduce from your own experience and current knowledge on the subject?—Quite so.

1209. The Commission may take it that is a general use of whiskey?—Yes. I think the custom of taking a night-cap is very well known.

1210. I am looking at the thing more from the point of view of the treatment of disease, you understand, than from the conditions of health?—Yes, I see that.

1211. Whiskey you think is largely used in the treatment of insomnia in disease?—Yes, that is so, undoubtedly.

1212. Then I think you have stated either in your evidence to Dr. Buchanan or elsewhere that pot still whiskey is more readily absorbed than the patent still?—Undoubtedly.

1213. Would you kindly tell the Commission on what evidence that is based?—I think the evidence would be that you get a more rapid action of the pulse—it would act more rapidly than if you gave silent spirit only. It must be absorbed more quickly.

1214. I do not dispute that proposition. I only wish to know the evidence on which it is based. It is generally accepted that all forms of alcohol are very rapidly absorbed, is it not?—Yes, undoubtedly.

1215. Even rectified spirit is very rapidly absorbed?—Yes, rapidly.

1216. But you think there is distinct evidence that pot still whiskey is more rapidly absorbed than others?—Yes.

1217. Is that based on your own observations?—Yes, I have noticed that undoubtedly in cases in which I have given different kinds of whiskey at the hospital, I do not mean to say that these observations have been conducted with scientific accuracy; but that is one's general feeling and experience.

1218. A very interesting result is it not, if it is so, that pot still whiskey should be more rapidly absorbed than other forms of whiskies?—Yes. It is the mixture, of course, of alcohol and ether that makes the difference.

1219. Do you think the members of the medical profession as a whole, when they are ordering stimulants in the form of whiskey, make a point of specifying whether it should be pot still or patent still?—No. I should say that a few years ago doctors did not concern themselves very much with the quality of the whiskey ordered, but more recently, and especially since this controversy, they have paid more attention to the subject, and they are keenly alive now to the difference.

1220. Are there any whiskies on the market that can be readily procured which are entirely patent still?—Yes; I believe there is one that is very well known, which is purely a patent product, and is advertised as that as if it was something extra good.

1221. We will not specify any whiskies, but you think there is distinct evidence that pure patent still whiskies do not produce the beneficial effects that you have observed in the others?—Quite so.

1222. And you are quite clear, in your opinion, from your own experience, that you have seen instances of disease where pot still whiskey has produced beneficial results that have not been obtained with patent still whiskey?—Yes, undoubtedly.

1223. You are quite clear about that?—Yes.

1224. And you are distinctly of opinion that rectified spirit of the Pharmacopœia has failed in some instances to produce beneficial results in typhoid and pneumonia?—Yes; I tried that more or less experimentally not long ago, and the reports of my House physicians were extremely unsatisfactory, and after a trial of, say, two days, we were glad in the interests of the patient to give up the rectified spirit and revert to the whiskey.

1225. I think perhaps it might interest the Commission if you would tell them this. Alcohol is prescribed to the patients sometimes for other purposes than as a stimulant, is it not?—Yes. It might be prescribed, one may say, almost as a food.

1226. That is exactly the point that I wanted to bring out. Would you be of opinion that, in cases of pneumonia or typhoid, to take the instances that you have mentioned, alcohol in the form of rectified alcohol would be useless as a food?—I am afraid I cannot answer that. I have never looked into it from that point of view.

1227. But I understood that you had been giving rectified alcohol in certain cases of these diseases?—Yes.

1228. It was given entirely as a stimulant?—Yes, entirely as a stimulant, and for a short period only, because it was found to be unsatisfactory.

1229. You would rather not express an opinion as to whether it might be useful as a food in such cases?—I am afraid I am not in a position to do so. I only looked at it from that point of view.

1230. I take it you are of opinion that bye-products of whiskey have no deleterious effect when they are taken in solution in the whiskey?—Not when taken in solution in whiskey in the comparatively small doses or proportions in which they occur there.

1231. You think that in pot still whiskies, for instance, in new fresh pot still whiskies, even there they might not be deleterious?—I should think they would be less safe there. I should think that new pot still whiskey would be deleterious in any case.

1232. What should you attribute this deleterious action to?—I should say to the raw alcohol, and possibly to the bye-products as well.

1233. Might I ask what you mean exactly by the expression: "Raw alcohol"?—Freshly prepared—of no standard; no age; newly prepared.

1234. Do you suggest that the alcohol undergoes changes as the result of age?—Yes.

1235. The alcohol does?—Yes.

1236. I mean alcohol in the chemical sense of the word—I do not mean the spirit but the alcohol. Do you think the ethylic alcohol changes as the result of age?—I think when combined with ethers it does, but not alone.

1237. The maturing of the spirit is not merely a change in the higher alcohols, the ethers and various bye-products? You think there are other changes in the alcohol itself?—Yes.

1238. You attribute somewhat great importance to these bye-products from the point of view of flavour, odour, and so on?—Yes, undoubtedly.

1239. Is there any evidence, for instance, that flavours and odours have, we will say, any beneficial action on the digestive processes?—Yes. We have an example of that in the cases of condiments—mustard and so on.

1240. That is the point I wanted to bring out. With reference to the point that Dr. Buchanan raised with regard to pellagra, that is a disease that is quite unknown in this country?—Yes. It is absolutely unknown in this country.

1241. You have not seen a case?—I have not seen a case.

1242. There are some other maladies of a similar type due to grain poisoning?—Yes. There is ergotism and lathyrism, and so on.

1243. You would suggest to the Commission that even if pellagra be due to the maize it is possible for the disease to be communicated by the products of distillation of maize?—I do not urge that point at all strongly. It was a mere suggestion.

1244. Do you think it is possible?—I am doubtful on the point. It was a mere suggestion.

1245. Do you think it is even a probable suggestion?—Possibly not.

1246. (*Dr. Cushny.*) Do you think the views you have given represent the general opinion of medical men, and particularly of medical men who have made a special study of pharmacology? Do you think the view that you have enunciated is the general view among medical men?—Yes, I should say so—of clinical physicians in London.

1247. Can you mention any specialist in Materia Medica who is of that opinion?—Yes. I will quote from the text-book of Sir William Whitla, of Belfast, whom you know, I think, as a distinguished pharmacologist. He says in the 1902 edition, which is the fourth edition, "The question of the dose and form in which the alcoholic stimulant is to be given is an important one. First as regards the variety of alcohol the writer believes that brandy or whiskey should always be preferred to wine, and the selection of brandy as against whiskey or *vice versâ* should be made after considering which of those agents can be procured in the purest form. As a rule in this country pure whiskey is more easily obtainable than pure brandy, and hence the writer always employs whiskey, and he is satisfied that the product of the patent still should not be employed. The so-called silent spirit and numerous blends into which it enters do not produce the cardiac stimulating effects of a matured malt whiskey prepared by the old pot still process. The ethers produced by the splitting up of the traces of fusel oil left in the latter process possess valuable stimulating properties, and moreover they appear to aid in the entire combustion of the spirit in the blood." That is Sir William Whitla.

1248. Then I notice in your own text-book that whiskey is only mentioned once. It is mentioned in one line, and all I can find about it is this: "Whiskey is 50 to 60 per cent. of alcohol." On the other hand, you have a long chapter on "alcohol," in which, among other things, you say that alcohol has a marked effect on the circulation, it stimulates the heart's action and dilates the superficial blood vessels. I notice you make the same statement here in your *précis*—you make the same statement in regard to whiskey, but not as regards alcohol, is that so?—I was dealing here with the subject of whiskey rather than with the subject of alcohol generally.

1249. But you make one statement with regard to alcohol in your text-book and the same statement with regard to whiskey in your *précis*, but exclude in that case alcohol?—But whiskey is chiefly alcohol, is it not?

1250. Yes. You say in your *précis:* "Whiskey, and by that I mean pot still whiskey, is a stimulant to the heart, blood-vessels and nervous system"?—Yes.

1251. I infer from that that you mean that the patent still whiskey is not a stimulant to the heart and blood-vessels, and so on?—It is a question of degree. I did not mean to say that the patent still whiskey has no stimulating action. I did not intend to convey that.

1252. I thought you said that that is your point of view?—No, I never maintained that for one moment; it is a question of degree. I did not say that the patent still whiskey was inert.

1253. As a stimulant? I understood that was your proposition?—No; it is a stimulant, of course. It is primarily a stimulant, although later on it may be a depressent, but the primary action is that of stimulation.

1254. Continuing that point, you say: "Whiskey acts as a stimulant to the heart and dilates the blood-vessels and is used to ward off heart failure and collapse. Its beneficial effects are due not so much to the alcohol which it contains as to the bye-products especially the ethers." Now in your text-book you say: "Alcohol has a marked effect on the circulation, it stimulates the heart's action and dilates the blood-vessels"?—Yes; but in the whiskey you have the combination of the two agents—you have two agents at work.

1255. You mean the whiskey has an extra action besides its alcoholic action?—Yes, and an extra added action with all the ethers and bye-products.

1256. You say in your *précis:* "Silent spirit in this connection is also useless"?—I did not mean to say that it is absolutely useless. It is comparatively useless—it is of less value.

1257. Then the question between pot still and patent still is a purely comparative one?—Yes, that is right.

1258. Now you say that the pot still is a more powerful stimulant, may I say, than patent still?—Yes.

1259. The difference is due to what?—The difference is due to the bye-products—to the ethers.

1260. Have you ever calculated how much bye-product there is in an ounce of whiskey?—No, but I know it is very small. The exact numbers were put to me once before in cross-examination.

1261. Do you suppose it is more than a grain?—Very likely not. I remember Mr. Walter putting the question to me.

1262. Do you not think that if it was the general view in the medical profession that when this one grain of ethers was present it had this powerful stimulating action, that some attempt would be made to isolate this and use it in larger quantities as a more powerful stimulant?—No, I do not think so; it is not a commercial product. We have our brandy and our whiskey and our champagne, and we do not want to deal with little doses of chemicals. It is not a practical point at all.

1263. Do you not think that some German manufacturers would be glad to isolate a thing like that and put it on the market as a product?—I daresay they would put it up in tabloids, as they could, or as a patent medicine, but I do not think it would be a success.

1264. Do you not think they would, if it were generally known in the medical profession?—Well, they do almost anything.

1265. Then another point I wanted to ask you is this. I think you said that silent spirit in this connection is also useless. I am going back to that paragraph. Do you know if pure alcohol is ever used in therapeutics?—Absolute alcohol?

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1266. No; rectified spirits?—Yes, it is used sometimes as a therapeutical agent, but I should say very rarely.

1267. Is it used under exactly the same conditions as you have suggested for the use of whiskey?—No, it is used for external application, sometimes.

1268. Perhaps not in London, but in other parts of the world, surely it is used alone very commonly?—In Scotland.

1269. I would not like to say in Scotland, but say in Germany. In Germany, they have not the blessing of whiskey. If you were to ask for whiskey, what would they understand you to mean?—I feel inclined to say lager beer, but probably that is not in your mind.

1270. Not in therapeutics?—I am afraid I could not answer that.

1271. Do they not use potato spirit, which is a purer alcohol than that of the patent still?—Yes, I daresay they do, possibly.

1272. Do you suggest the results are inferior to those of whiskey?—Yes, I should think so. I would rather use whiskey than a spirit made out of potatoes.

1273. So would I?—I should think the result of taking a spirit made out of potatoes would be extremely unsatisfactory, and would mean a very bad headache in the morning.

1274. I do not think the results are very much worse if you look into the literature on the subject. Now referring to the next paragraph of your *précis*, do you really suppose that the soporific effect is due to the one grain of ethers in the ounce of whiskey, or is it due to the alcohol?—I think that you get a better effect from taking whiskey at night than you would get from taking potato spirit at night.

1275. Do you think that the soporific effect is due to the alcohol, or to the ethers?—To the combination—I may put it in that way.

1276. Do you suppose that the alcohol has a soporific effect?—Alcohol undoubtedly.

1277. Do you suppose you can differentiate between the soporific effect of half an ounce of alcohol and the one grain of ethers in an ounce of whiskey?—I should say that would depend on the individual. Some people can take half an ounce of whiskey and some people can take far more. Some people will take half a pint.

1278. Do you suppose that people take whiskey as a soporific in preference to alcohol owing to recognising that it is a better soporific, or simply because they like it better, and that it has a better flavour?—It is a matter of experience. A man sends out and gets a bottle of whiskey and has it on the table at night, but he does not send out and get a bottle of silent spirit if he can help it.

1279. Why not, do you suppose?—Probably he has tried the silent spirit and has got a headache in the morning and does not want to try it again.

1280. Is it, or is it not simply a matter of taste and flavour?—No, it is not; it is the result of experience, going on all over the world by a great number of people.

1281. Your statements have come down mainly to a matter of comparison between alcohol and alcohol plus this small amount of impurity. Can those comparisons be very accurately made?—Not with the same precision that you would make experiments in the physiological laboratory—not with the same accuracy that you could with Roy's apparatus, but still they are fairly accurate—as accurate as one can expect in dealing with human beings and not with frogs. If my patients were frogs I should get better results—more accurate results.

1282. Do you know of any of these accurate experiments having been made?—I know of no recent experiments of that kind. Experiments with Roy's apparatus undoubtedly were made some years ago in conjunction with experiments on the relative effects of chloroform and ether as a stimulant to the heart, but I do not know that any experiments have been made with Roy's apparatus on the comparative effects of pot still whiskey and patent still whiskey.

1283. Do you know if the ethers of pot still whiskey have ever been investigated experimentally?—No, I do not know—it is quite possible that such experiments have been made, but I know of no record of them.

1284. Do you not think that if most pharmacologists believed with you that the ethers were an important ingredient in the stimulating effect, they would be very glad to take up that subject?—I cannot say. The number of pharmacologists in this country is somewhat limited and their time seems to be pretty well occupied.

1285. Still, I do not know of any subject of so much importance as the one you have suggested?—I venture to suggest it is a good subject for investigation.

1286. If I may say it, if I were of your opinion on the subject, I should take it up at once. Then there is another point: Do you think that those ethers are actually poisonous alone in ordinary doses, or do you think that it is necessary to have alcohol added to those ethers in order to have very beneficial effects?—There is a case recorded by Swann, of Bristol, where a man took fusel oil during the greater part of his life because it was given to him and he got it for nothing, and finally he died, and when he died they found nothing the matter with him. That is a case in point.

1287. You seem to consider that the mixture was necessary—that you could not get effects from one; at least, the stimulating effects of the ethers you could not get without the addition of the alcohol?—Combination is undoubtedly useful. We may refer possibly to the case of sal volatile that Dr. Bradford quoted just now. The stimulating action does not depend on any one ingredient but on the combination—the way in which it is presented.

1288. Including the alcohol?—Yes, including the alcohol, and in the same way of many aromatic mixtures.

1289. Gentian and soda, and so on. In experiments on animals do you know if pure alcohol has been investigated at all, and what the results are as regards the stimulating properties on the heart, for example?—Yes. It is a stimulant to the heart to begin with. There is no doubt about that.

1290. No one has suggested in animal experiments that they would be improved by using whiskey instead of alcohol, as I understand?—Experiments on a frog's heart?

1291. Yes?—No. I do not think the whiskey would agree with them.

1292. On animal hearts. You referred to Professor Wood's text-book on therapeutics? Do you remember if Professor Wood mentions whiskey apart from alcohol as a cardiac stimulant, or does he describe them together? Does he mention whiskey as a cardiac stimulant apart from alcohol as a cardiac stimulant?—I am not aware that he does. I do not recall any such passage.

1293. Does he hold that whiskey has any particular different effects from alcohol?—No. I am not aware that he says that.

1294. I am afraid that rather takes away from the value of your statement with regard to Professor Wood's book, does it not?—There is a long discussion on the whole subject in the book. There is a reference to certain experiments by Martin, and after giving a long abstract of them he says practically that he does not think that Martin has proved his point. Then of course there is a discussion about Binz, Barnes, Schmiedeberg, and so on.

1295. This does not touch whiskey, I think?—No, not so much whiskey as alcohol generally.

1296. He regards the action of whiskey that has ethers and alcohol without ethers as practically identical as I understand. At least, he does not state that they are different?—He does not state that they are the same.

1297. He includes whiskey as an ordinary preparation of alcohol, I suppose?—He deals with the whole subject under the head of alcohol. There is not a chapter on whiskey and one on brandy and one on gin and one on liqueurs, but he deals with the whole thing altogether. There is a long chapter on cardiac stimulants and one sub-section on alcohol, which occupies a great number of pages.

1298. With regard to the question of the absorption of alcohol which was brought up in your examination by Dr. Buchanan, I think you said that pot still was more readily absorbed than patent still?—Yes.

1299. Is there any evidence at all—any possible evidence—that you can bring forward on the point?—I think I referred to that but a few minutes ago. I said as far as I knew it depended upon clinical experiments which were not made, and have not been carried out with the absolute accuracy with which we carry out experiments on frogs.

1300. Would you say that it is a positive fact, or that it is a possible explanation? Would you say it is a fact that it is more readily absorbed, or would you say that pot still is perhaps more readily absorbed?—Pot still whiskey is more readily absorbed.

1301. Would you make that definite statement?—Yes; to the best of my belief that is so.

1302. Is it not possible that the change in the heart may perhaps arise from gastric effects and not from absorption at all?—That is another theory. I do not know of any evidence to support that suggestion.

1303. I think you will find a good deal. Now as regards the food value of alcohol. I think there was some doubt in your mind as to whether patent still whiskey was a food?—I am afraid I cannot answer that question. It is not a point to which I have paid any particular attention. I have never thought very much about whiskey as a food. Of course, I know it will replace food to some extent, but I know little or nothing about the comparative value of pot still whiskey, and, say, silent spirit in that particular connection.

1304. You do not know that one is superior to the other?—No, I do not know that. I have not paid particular attention to that.

1305. But is alcohol—the pure ethylic alcohol—a food?—It replaces food undoubtedly.

1306. In the last page of your *précis* there is a passage I do not understand. I do not quite understand the first paragraph as to silent spirit. "Silent spirit creates thirst"?—That is not a physiological observation. It is the generally-expressed opinion of a person who takes whiskey as a beverage. Those observations were not made on patients.

1307. That is a matter as to which you do not give expert evidence as you do with regard to the patients, I take it?—Quite so. It is not expert evidence, but it is the opinion of the man in the street—the opinion of the man you meet at your club and so on. It does not amount to more than that.

1308. I think it would be an advantage to the Commission if you would refer to any further books. It would be a matter of great interest to myself?—I am very sorry. I have prepared a list, and made out all the extracts, but unfortunately I have not got them with me, but I will place them at the disposal of the Commission with pleasure.

1309. (*Dr. Adeney.*) You have described to us experiments or observations that were made on the use of pot still whiskey as distinct from what you call patent still whiskey?—Yes.

1310. The difference in the results you have ascribed to the secondary products in these different spirits?—Yes.

1311. We have been told that the secondary products in some of these patent still spirits are sometimes equal in quantity to the secondary products in the pot still whiskies, so that in making experiments of this kind it is important, is it not, to have an accurate knowledge of the composition of the pot still spirits and the patent still spirits?—Yes, undoubtedly.

1312. Have you any such knowledge of the samples of spirits you employed or of the sources from which they were derived?—No chemical knowledge. The composition of many of these combinations, if I may call them combinations, is given in some of the documents produced at the Police Court, and I had access to those.

1313. I am now talking of your own observations which you say you have made in the clinical ward?—Most of those were made in the course of my own private practice—not in consultation practice.

1314. You have no exact knowledge then of the composition of the samples of the spirit that you have had administered to your patients?—I have had no opportunity of obtaining a chemical analysis of the bottles of whiskey.

1315. So that you really do not know whether the patent still spirits you used contained secondary products at all, or in any considerable quantity?—That may be argued, but as I say the composition of many of these patent still spirits has been published.

1316. Of course in scientific experiments of the kind you must have the composition of the actual things you are dealing with. I want to know what was your knowledge of the composition of the samples you employed?—Whiskey is sold under a particular brand, and I take it that bottles of whiskey sold under the particular name are practically the same. I did not analyse or have analysed the one particular bottle, but the general spirit sold under that name has been submitted to analysis.

1317. Under what brand is silent spirit sold?—Do you mean the name of it?

1318. Yes?—Do you wish me to give the name?

1319. I should like you to tell me for my own information?—I was under the impression that Cambus was.

1320. You call that silent spirit?—So I supposed.

1321. Do you consider that silent spirit and patent still spirit are synonymous terms?—As nearly as possible, I should think.

1322. (*Dr. Horace T. Brown.*) I should like to ask you a few questions. You attribute the value of whiskey in medicine entirely to certain bye-products, I understand?—No.

1323. You attribute the medical value of whiskey to certain bye-products?—No, not entirely. I did not say entirely.

1324. But in comparing a pot still whiskey with a patent still whiskey of equal strength you have there the same amount of alcohol practically to deal with, so that the effect, so far as regards the alcohol, would be the same in both cases?—Yes.

1325. We could then consider the probable effect that would be produced by certain products?—Yes.

1326. We can eliminate the alcohol altogether from our argument for the moment?—Yes.

1327. You attribute the medicinal value mainly to the bye-products, and I think you said to the ethers?—Yes, using it as a generic term and calling them all ethers.

1328. Are you aware of the relative amount of ethers in patent still and pot still whiskey, or spirit, if you like to call it so?—It would be greater in pot still, of course.

1329. We have certain analyses of that kind in large numbers, and I think we may take it that the ethers themselves in Highland whiskey amount to something like 50 parts per 100,000 of absolute alcohol; whereas the ethers of the patent spirit amount to approximately half that amount—that is, 25 parts per 100,000 of absolute alcohol. Would you mind working out for a moment what the difference in those ethers would be in, we will say, two ounces, or take 1,000 grains—would it not be this, that your 1,000 grains of pot still Highland whiskey would contain about half a grain of ethers per 100,000 of absolute alcohol, which would be equivalent to about one quarter of a grain per 1,000 of proof spirit? So that your one glassful of Highland whiskey containing 1,000 grains would contain about half a grain of your ethers. Is not that so?—I am quite prepared to accept your statement; but I am not prepared to work all that out myself.

1330. That is taking the published accounts of the amount of ethers in ordinary Highland spirit, amounting to about 50 parts per 100,000 parts of absolute alcohol. That, I take it, would come down to half a grain in a wineglassful of the pot still spirit reckoned as absolute alcohol, and a quarter of a grain reckoned as proof spirit?—It is half a grain, which is equivalent to half a minim of something in a wineglassful.

1331. No, it is a quarter of a grain if you reduce it to proof strength?—I will take the quarter of a minim in a wineglassful.

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1332. That is a quarter of a grain, we are agreed as to that. What is the amount of ethers in a corresponding amount of patent still spirit? I make out that it is just about half the amount, so that the amount in an equal quantity of 1,000 grains of patent still spirit reduced to proof strength would be about one-eighth of a grain, and the whole difference as regards the amount of ethers between those two spirits, one from pot still and the other from patent still, would be about one-eighth of a grain. I understand it is your opinion that the different physiological effects which you say are produced by these two spirits must be due to this one-eighth of a grain of ethers?—All I can say is, that if you are going into those complicated figures, I am afraid I cannot follow you. I quite accept what you say as being correct.

1333. I think you will find that it is correct. But you must attribute the whole of the difference if you put it on the ethers to about one-eighth of a grain in one glassful of two ounces of spirits?—I am afraid I can only speak as a physician; I am not a mathematician.

1334. Can you give us any opinion about Dr. Chittenden's work? I understand he made a very elaborate investigation on the influence of whiskey, rum and brandy, and so forth?—Dr. Chittenden is an American writer; he is not a Doctor of Medicine. He is a Ph.D., but whether that means a Doctor of Philosophy or a Doctor of Pharmacy, I do not know. He wrote a great number of papers on the subject extending over several numbers of the particular journal in which it appeared. I read those very carefully, and it seemed to me to be written entirely from the chemical point of view, and I do not think they were very satisfactory.

1335. Did he make a number of experiments on the influence of various spirits on individuals?—Yes, there were a number of experiments, if you like to call them so, recorded, but it did not seem to me to have very much value.

1336. Could you tell us the general result of those experiments?—No, I cannot remember now. I read the whole thing very carefully indeed, and it did not impress me much. It did not seem to me to be a great work.

1337. Did he not come to the conclusion that it was a question of the amount of ethyl alcohol, rather than of any specific differences in the bye-products?—It is quite possible, but it did not make very much impression on my mind.

1338. (*Chairman.*) You have known, I suppose, this patent still whiskey sold for a good many years?—Yes.

1339. Under what name has it been sold?—It has been sold under the name of whiskey, I am afraid.

1340. It is now suggested that we should accept the form "patent still spirits" as distinguished from whiskey. When did you first hear the suggestion made that patent still products should not be called whiskey?—I am afraid I cannot put a date to it.

1341. Was it ever raised until the proceedings that were taken before the magistrate, Mr. Fordham?—The matter had been talked about and discussed before that, I am pretty sure.

1342. But it is a serious matter if these millions of gallons have been sold and treated by the trade and public as whiskey that there should be a new baptism, and that they should be called spirits instead of whiskey. I want to know when did you first hear the suggestion that that ought to be the title applied to patent still whiskey?—I am afraid I cannot answer that, but certainly I will put it in this way—it was not many years ago. I could answer for that.

1343. That is quite sufficient. You have spoken of the difference of the effect of the two makes on patients. How do you know which is patent still whiskey and which is pot still whiskey?—I think I have explained that to some extent. The analyses of these different kinds of makes have been published. Many of these were published in connection with the Islington Borough investigation. I say "published"; they were handed round, certainly, to various people. They were submitted to me before I commenced my investigations, and I made a careful study of them.

1344. That is not my point at all. I want to know practically. You gave a prescription that your patient should have a certain quantity of whiskey, and I suppose somebody gets it and then produces the whiskey. How do you know before the patient takes it, so that you may know the result after the patient has taken it, which is pot still and which is patent still whiskey?—I only know from the analysis placed at my disposal and by the label on the bottle.

1345. That is the very point I want to know. Is it ever labelled "pot still" or "patent still"?—No, but it is labelled by a certain name.

1346. And the name on the bottle brings it home to you?—There is some fancy name possibly, and I know that whiskey with that fancy name has been analysed and I have that analysis in my possession.

1347. I want to get a little more closely to the point. I want to know, because it is important to know, what the public would know. Could the public ever determine it? As the law exists, could they ever determine whether it was pot still whiskey or whether it was patent still whiskey?—I do not think the public could know unless it was stated on the bottle, unless there was some distinctive sign.

1348. As far as you know, it is not stated on the bottle?—No, rarely or never in the case of the patent still product.

1349. Then the public could not know?—No, the public do not know.

1350. Then you give us evidence that you would not know?—I would not know unless I had had these analyses submitted to me.

1351. How have you been telling us about the effect on patients of this and that when you did not know which was which?—I beg your pardon. I did know.

1352. But how?—Because the whiskey is labelled by a certain name and all those whiskies have been analysed, and I have had those analyses in my possession.

1353. Surely you, as a physician would not know what whiskey was produced at each of these different distilleries when there are 127 of them in Scotland?—No, but I know which are pot still whiskey and which are patent still whiskey.

1354. Why? By what means, if you did not know what they were doing at the different distilleries?—Simply because these things have been analysed.

1355. Surely you have not had side by side analyses of these two different qualities of whiskey out of the 127 distilleries of Scotland?—I do not say of the 127, but I do say that most of these makes have been analysed and the analyses have been circulated.

1356. May I take it from you then that as a physician in Westminster Hospital you would not know when whiskey was administered to your patients whether it was pot still or patent still?—We take a great deal of care about our whiskey.

1357. Is that so? Would you know?—Yes, I should know. With regard to Westminster Hospital I believe—I am not speaking absolutely accurately—that our whiskey was analysed by Dr. Dupré.

1358. I do not care about the analysis. I want to know what you did. Did you, finding that you held a strong opinion against the patent still whiskey, give instructions that it should not be used by your patients?—No. I have not the catering of the whiskey for the hospital. I may hold an opinion, but my opinion does not necessarily dominate my colleagues in the whole place.

1359. If you prescribed it to a private patient would you carry your view so strongly that you would put in the direction or the order "this must be pot still whiskey"?—I should undoubtedly tell the patient "Take so much whiskey and mind you have such and such whiskey."

1360. What is the patient to do? He may be a poor man or a rich man. How is he to get pot still whiskey?—Supposing I think, or have reason to know, that a certain Gilbey whiskey is a pot still whiskey, I tell him "You go and get Glen so-and-so whiskey, and you will get what you want."

1361. This is rather important. Is it a fact that if you knew that Sir Walter Gilbey had pot still whiskey and patent still whiskey to sell you would send a patient to get the one class of whiskey and not the other?—Undoubtedly. They have a name to them.

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They are described definitely. They have three whiskies—two of them are pot still and one is not.

1362. Is it described as pot still whiskey?—Yes.

1363. I asked you just now if they ever were and you said they were known by the different distilleries?—In the case I am referring to of Gilbey's they are undoubtedly stated and guaranteed.

1364. Then they are described differently?—In the case of Gilbey's undoubtedly.

1365. When was that statement first commenced?—I do not know when Gilbey's did it, but they have a Spey Royal and a Glen Spey, and I believe both of them are guaranteed to be pot still whiskey.

1366. What is the name it would be described by? Would it be that it was "Pot still whiskey" or "Spirits from grain"?—No. "Pot still whiskey" is the name they put.

1367. That is the whole point. It is called "whiskey"?—"Pot still whiskey."

1368. By Gilbey's?—Yes.

1369. Down to the present time?—Yes. Then they have another one which is a blend, and which is said to be a blend.

1370. Probably we shall hear from Sir Walter Gilbey. Was there a difference in price in those two when you directed your patients to get one or the other?—One of them is 4s. 6d. a bottle—that is a pot still—and I think the other one is a little cheaper, but I am not positive. I should not have bought the blend, so that I do not know.

1371. (*Dr. Horace T. Brown.*) Are you quite sure that Messrs. Gilbey label any of their spirits "Pot still"? They tell you they guarantee that it is pot still, but is it on the label?—I am under the impression that it is.

1372. I think not?—I bow to your knowledge, but certainly in the advertisement it is so stated.

1372*a*. Guaranteed pot still?—Yes, in the advertisement in the "Daily Telegraph." As to the label I cannot be absolutely positive.

1372*b*. (*Dr. Bradford.*) With reference to what fell from Dr. Horace Brown, Professor Chittenden is Professor of Physiology, is he not, at one of the leading American Universities?—I was under the impression that he was Professor of Pharmacy. Am I wrong?

1372*c*. He is a recognised authority on dietetic questions, is he not?—Yes; he has done a lot of good work.

1372*d*. He is a man of great reputation as regards the physiology of digestion and general dietetic questions, is he not?—Yes; he has done excellent work.

1372*e*. His opinion is one to attach a considerable amount of weight to?—Yes.

The witness withdrew.

Adjourned to Monday, 16th March, at 12 o'clock.

FOURTH DAY,

Monday, 16th March, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. ANDREW JAMESON, called.

Mr. A. Jameson.

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1373. (*Chairman.*) I believe you are one of the managing directors and one of the proprietors of the firm of John Jameson & Son?—I am.

1374. It is a limited company now, I think?—Yes, a limited company.

1375. Your distillery is at Bow Street, Dublin?—In Bow Street, Dublin.

1376. I believe that distillery has been carried on by members of your family since the year 1805?—We have owned the whole distillery since then—the family have.

1377. I will not give you higher place than to say it is as well known a distillery as any distillery in Ireland?—I believe it is.

1378. Will you give me first your definition of what is meant by the term "Irish whiskey"?—It is a spirit distilled in a pot still, which should go through at least two or three distillations, and made from a mash that comes from cereals grown in Ireland—commercially grown in Ireland—in large enough quantities to be quoted as one of the regular productions of the country.

1379. I think you say that your distillation must take place in Ireland?—The distillation must take place in Ireland. I speak further because I believe that the water is an essential element in it, and that alone would make it a necessary thing to carry it on there.

1380. Do you mean by grown in Ireland that it must be absolutely grown, or that it is grain that can grow in Ireland? I mean, suppose you were to import Scotch barley?—Yes, it must be made from grain which can be grown in Ireland.

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1381. That is not quite what you said?—You are quite right.

1382. It is grain that is, as some use the term, "indigenous" to Ireland, or it is grain that can be grown in Ireland, or grown under such circumstances that it may be termed Irish grain?—That is the way I should put it.

1383. Have you any proportion of the materials that may be used?—I should think they vary considerably. The main ingredient in the whole thing is barley, malted and unmalted; but added to that is some wheat and some oats, very little rye, practically inappreciable.

1384. Can you give us any proportion beyond which you must not go in respect of any one of these materials?—I could hardly say that. Well, as far as malt is concerned, if it was pure malt and altogether malt, nothing in it but malt that has been used—I do not think it is often used in Ireland now—but it would be certainly Irish whiskey made from pure malt.

1385. So far, so good. What are the number of materials in addition to the malt you would use in your distillery?—No. 1 is barley.

1386. Unmalted?—Unmalted; and then wheat, and oats and rye; nothing else.

1387. Have you any proportion to give the Commission in respect of those ingredients which you have last mentioned?—Different distillers have different mixtures of those, and I should hardly like to go and give publicly exactly what we use, you know.

1388. I did not want that; that, of course, would be a little unfair to you. Can you speak theoretically, and can you assist the Commission by telling us to what limit we may go with the materials other than malt and other than barley?—Something like 4/5ths of the mash would be barley, malted and unmalted. I am just stating to you what the facts are as far as we are concerned, and I believe something on those lines is the practice with most Irish distillers.

1389. You give 1/5th within the limit of safety for other ingredients?—That would entirely depend on the amount of flavour that a man wanted to get. It would be still Irish whiskey even if he put in more than a fifth.

1390. Do I understand you to speak generally as regards the 4/5ths? Take it for the moment that your general statement prevails, I want to deal with the other fifth. Is there any proportion attributable to the other ingredients when you come to deal with the other fifth?—Do you mean the proportion of the oats, the wheat and the rye?

1391. Whatever other ingredients you have given us. Those are three other ingredients?—The rye is extremely small; the wheat is something like four times the rye, and the oats is rather more than double the wheat, and they are all included in about a fifth of the whole.

1392. That is what you think would be safe?—Well, I would not like you to form any false opinion about it. That is a point which would depend on each distiller, as he chose to get a certain flavour.

1393. I am coming to that. Where is the limit beyond which this compound ceases to be whiskey—I mean in relation to the employment of the ingredients barley and malt? You have given me 4/5ths; supposing it came to 2/3rds, would that be whiskey?—Certainly.

1394. How low would you go?—I would call it whiskey as long as you used the pot still, and Irish whiskey as long as you used the class of ingredients which I have been talking of.

1395. I want to know the proportion we have to deal with. How low can you go in the scale, the proportion of barley and malt, and still retain the name of whiskey?—I would not allow limits.

1396. Might a man make it all of rye if he could, or of corn, or even, going to a lower material, potatoes or turnips, if he liked and call it whiskey?—He could not go to potatoes and turnips.

1397. I give that as an extreme example; but, taking the malt and barley away, might it be whiskey without any malt and barley in it?—He could not make it without malt.

1398. He may make something?—Not with a pot still. He could not produce a mash that he could distil in a pot still.

1399. You say that is physically impossible?—I believe there are members of the Commission who know better than I do, but chemically, I do not think he could. He must convert the starch, and he must have malt to do that.

1400. I daresay you are right, but can you give me any limit which is necessary to produce this action in the pot still in respect of the proportion of barley?—The chemical limit, I should say, would be the amount of malt necessary to convert the starch of the unmalted grain.

1401. But you see he need not use unmalted grain?—Then it would be all malt.

1402. Is that so; because you see unmalted grain does not apply to corn, rye and things of that kind?—Yes, rye and oats and wheat.

1403. Do you apply the term "unmalted" to those?—They are unmalted; you can malt oats; wheat would be very difficult.

1404. I was going to ask you about that. I did not know that you could malt wheat?—It would be very difficult, because it has not got a husk on it, but it could be done. It could be done to a certain extent, so that a certain amount of conversion would take place, by the process of growing as it is done in malt.

1405. Let us go back for a moment. You said you would confine the name "whiskey" to the pot still manufacture?—Yes.

1406. Will you give your reasons to the Commission, please, why you excommunicate the patent still?—Because the patent still excommunicates the flavour; the pot still keeps the natural flavour of the grain used.

1407. The pot still, I understand, subjects the material to the action of fire direct?—Yes.

1408. In the patent still it passes through certain passages backwards and forwards?—The naked steam in the patent still separates the spirits from the materials of the wash—by the naked steam—and carries on the spirit pure and simple. The different places where the spirit is taken off in the patent still I suppose have already been explained to you. I do not know a great deal myself about the patent still, because I have never worked it, and never have seen it at work; as a matter of fact, until not very long ago I had never seen one.

1409. Your opinion is of value, and we want to get it from you, why you say that any product coming from the patent still is not entitled to the name of whiskey?—Because the patent still brings over a pure spirit. In the process of manufacture by the patent still the flavours which we pot still distillers try so much to preserve are taken out of the spirit.

1410. If you will allow me to say so, I can well understand this argument being in favour of the superiority of the pot still, but I want to know why you say that a patent still spirit is not entitled to the use of the word "whiskey" at all. This is a question of superior flavour, as you put it. It is not determining what the product is?—If I may go back a little, originally, of course, whiskey was always made in a pot still; the patent still, as everybody knows, only came into use within, probably, the last 50 years.

1411. 1831?—1831. For years after that it was not used to any extent.

1412. Quite so?—So the name of whiskey undoubtedly belonged to the article which was produced in a pot still; that article produced in a pot still had a certain flavour, and that flavour was called a whiskey flavour. The thing that is produced in a patent still has not got that flavour.

1413. I follow what you say about the question of flavour, but I want something from you of substance as to the identity of the article. Do you know what the comparative materials employed in the patent still as compared to the pot still are? I do not know whether you know that?—In the patent still, as a rule, as far as my knowledge goes, the mash is made up of just enough malt to convert the maize that is used, and it is nearly altogether maize that is used because—if I might give what appears to be the reason?

1414. If you please?—As they lose the flavour, the patent still distillers have not got any reason for using the high-class materials which we pot still distillers need, who are trying for flavour.

1415. What does the flavour come from?—From the materials used in the pot still.

1416. What are the products that produce the flavour as distinguished from the body?—That is a highly chemical matter as to which I would not like to give any opinion to you, but it is practically an infinitesimal quantity of the whole which I believe a chemist calls an impurity.

1417. A bye-product?—Why the chemist calls it that, I do not know, but that exists in the whiskey that comes over in the pot still; and if we altered our materials, or had bad materials, anything with a taste or anything of that sort, we would spoil our whiskey at once; for instance, if we attempted to use maize it would at once alter the whole flavour of our whiskey.

1418. But the flavour is one thing, and the substance produced is another. Is it your view that there is anything deleterious in the product of the patent still?—No, certainly not, only that it is not whiskey.

1419. That depends. Of course, since the patent came into operation, as you say about 50 or 60 years ago, this patent still whiskey has been sold as whiskey in Ireland?—There is a great deal of difference now. That is a statement which it is rather difficult to discuss, because in the trade, amongst wholesale people, when a man sold patent still he had to say what it was, but when it got down to the consumer it was sold as whiskey, undoubtedly.

1420. Why do you say that when the wholesale seller was selling patent still he had to sell the patent still by name; where do you get that from?—I say that a distiller of patent still could not sell that to a wholesale dealer without telling him it was patent still.

1421. Will you tell me why you say that?—Because I believe it to be the usage of the trade.

1422. You say he could not?—I suppose the Commission will probably find it out from other witnesses, I am not in the wholesale trade myself except as a distiller; but I believe that is the practice of the trade.

1423. You are not a patent still manufacturer, and you would not know this very accurately, but that is your general impression?—I have knowledge of it from men in the trade who have told me that is so, and any study of a trade catalogue will show it, or any auction list will show it.

1424. Selling it as patent still, and by the side of it putting pot still—is there any difference which would be known to an ordinary person excepting the flavour?—If you except the flavour it must lose a lot, because there is no difference between port and sherry, except the flavour, probably.

1425. Well, I do not know, there are different flavours of sherries and different flavours of ports. With regard to whiskey, as regards health, as regards effect, and as regards stimulant power, is there any difference except this matter of taste between the two?—That would be a matter of personal opinion. I think there is a very great deal of difference of course.

1426. In what direction is it? Is it in the direction of stimulating power, or effect on health, or its strength that you say the pot is superior?—I would not like really to give any statement as to health, because I know nothing about it.

1427. I wanted to know what was in your mind when you said that superiority existed?—If I asked for a glass of whiskey and I got a glass of patent still spirit, I would be very much displeased, and I would have a flavourless thing which would not in any way give me an idea of a glass of whiskey or anything compared to it.

1428. You think that would apply to an ordinary customer who was not so accustomed to the difference as yourself?—I am sure if he could get pure patent still, it would; but in Ireland, as far as I know, there are very few people who ever did get a glass of pure patent still spirit.

1429. Take your general knowledge: Do you think an ordinary customer in England, who stands impartially between Irish whiskey of different kinds and Scotch whiskey of different kinds, and asks for a glass of whiskey, would repudiate the taste of the patent still as whiskey?—I think the ordinary man would, certainly.

1430. I do not want to go too much into detail, but can you give me a general description as to the inefficiency of the patent still spirit? Is it inefficient in itself, or offensive in itself?—It has practically no taste at all, except as alcohol; it would have some effect in elevating him, but as to giving anybody the flavour of a pleasant drink, or anything of that sort, I should say, certainly not.

1431. You stated as your impression that a considerable bulk of the ingredients of the patent still is made of maize?—Yes.

1432. In your view is maize when used in large quantities injurious, or only defective as a product?—It is not injurious. I have no reason to think it should be injurious.

1433. Does it produce a bad taste, or is it inefficient as a stimulant?—If it were used in a pot still it would produce a bad taste.

1434. But in a patent still?—In the patent still the taste is eliminated and you get the pure alcohol.

1435. Can you make patent still whiskey according to your view with maize without using malt or barley?—No, you need enough malt (barley you would not need) to saccharise the starch of the maize.

1436. Can you give any proportion which you think you could safely use of maize and yet produce something which may be regarded as whiskey?—I do not think we use maize at all in any sort of proportion.

1437. I am on the patent now?—Yes. I can only judge from the evidence I have heard, and I believe something like 15 to 25 per cent. of malt is used to something like 75 per cent. of maize.

1438. So we have heard?—That is a chemical matter, and any chemist would know.

1439. Would that, in your view, produce a worse product for the patent still than is produced if you use a greater proportion of barley?—I do not think in the patent still it would make any difference.

1440. You do not?—No.

1441. As regards the flavour?—As I have said, it has no flavour, and I do not think it would make any difference. I believe the practice in the patent still trade is to use maize and as small a proportion of malt as they want.

1442-3. I suppose you know that a great deal of blending of whiskies takes place. I do not ask you to desecrate your whiskey, but, theoretically, could you blend a certain quantity of pot still whiskey and patent still whiskey without destroying your pot still quality?—As long as people will only use patent still to mix with our whiskey we can always find it out. Both our taste and the chemists help us better to distinguish the use of patent than if we blend two pot stills together.

1444. I do not quite follow you. Do you object to the blending of certain quantities of pot and patent?—I consider that if they use patent at all they are only lowering the quality of the pot still.

1445. In what respect are they lowering the quality?—From the pure commercial point of view the pot still costs a great deal to make; it is a very expensive process.

1446. I quite agree?—I have never heard of it being made under at least 2s. a gallon. Our whiskey costs us a great deal more than that to make. Patent, we all know, can be made from something like 9d. to 1s. a gallon.

1447. I want to know as regards what the effect is—I do not think you can give a proportion—of a certain proportion of pot still being blended with patent still. What is the effect upon the drinker?—If I were to describe the effect on our own whiskey I should think it would deteriorate the quality. It would take away from the flavour.

1448. You say proportionately to the amount of patent still that you put into your pot still the flavour would go?—Yes.

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1449. But if you put so much water into whiskey the flavour goes, and to a certain extent the strength goes?—Oh, no.

1450. I do not know about flavour, but strength?—With water bringing it down to merely decent drinking strength, I do not know that it would make any difference. You must put the water in.

1451. You are speaking of the flavour going, but I prefer to ask about the strength. Would you object to blending a certain quantity of the patent still with yours?—Certainly, because if the blend has a certain quantity of patent, while the strength, of course, is kept up in the whiskey which you put in your glass to mix with the water, the quantity of spirit put in will have less flavour; therefore, the whiskey and water will have less flavour than if it were our whiskey by itself.

1452. I perfectly understand, but I do not follow whether from the positive point of view that would be very injurious to the drinker, to the retail purchaser?—It is injurious in this sense. I can tell you what happens in our own business if you like.

1453. If you please?—We have had information given to us of whiskey being sold as ours which has been inferior in flavour. We have had it analysed, and we find the patent is in it, and when it is a case where we can prove it has been put in, we always prosecute whoever does it.

1454. That is not the point. As regards Jameson's naturally you do not like it; but I am speaking of the general effect on the public. If a man got a mixture is there anything but the loss of the flavour of Jameson's whiskey that he can complain of?—I think the same thing applies to every pot distiller in Ireland.

1455. If you please. It is the loss of the pot still flavour?—It is the loss of the pot still flavour, the moment you put in the patent.

1456. So I understand. The first element would be, would it not, if the retail vendor behaved well, the purchaser would get this blended whiskey cheaper than he would get the pure Jameson?—He would, of course, but whether it would be a question of price or not I think he should be told.

1457. We will come to that, and I am going to ask about that, as that is quite a proper question?—The main profit in the transaction belongs to the blender. Nearly all whiskies when they come to the consumer are sold at much the same price.

1458. That is the very point which I am going to address your attention to, but at present we are on this one point, that the consumer would not be at any great disadvantage in respect of either health or stimulating power by having a blend, but he ought to obtain it at a cheaper price?—I should say so.

1459. I think you used the term peat just now. There is no peat used in Ireland?—Not that I know of.

1460. Of course, it is in Scotland?—The peat is used to dry the malt. That is how it gets the flavour.

1461. Yours is coal?—Ours is coal, anthracite coal, by which the malt is dried.

1462. You know this blending process has been carried on to a considerable extent?—Yes, very largely; but I do not think it has been carried on much in Ireland.

1463. Not much in Ireland—are you right?—Very little in Ireland; except in the North of Ireland I do not think it is carried on to any extent at all, except with very common whiskey.

1464. If it has not come much under your notice, we can get it from practical blenders who know more about it. Do you know about it?—The blending?

1465. Yes?—No, not in our part of the country at all, as far as I know. It is done, of course. We know it is done.

1466. I want you to help us, if you please, a little. Take these processes as they occur, and let us first start with your distillery. I suppose some whiskey goes into bond, and some goes for exportation, and some goes for consumption. What is your practice as to giving notice as to what is contained in your casks as you send them out, both as to product and as to age?—All whiskey is sold by age. I do not understand your question as to what it is made of.

1467. Do you call it "Jameson's whiskey"?—Yes.

1468. You give the name of your well-known firm?—Yes.

1469. That you put on all your casks?—Yes, on all our casks. We are bound to. I believe everybody does in a pot still distillery. The name of the firm is put on the cask, and then it is sold.

1470. I am not aware that there is any statute that causes you to be bound to put the name on. It is a mere matter of custom, and to a well-known firm like yours it is an advantage?—I thought it was a Revenue question. I thought it was an Excise question, but I do not know.

1471. It is advantageous to a well-known firm like yours that your name should go on, and you prefer to put it on?—Of course, we do.

1472. (*Mr. Guillemard.*) It is only the name?—Yes, the name.

1473. You say the name only?—Yes, I think the name must go on.

1474. (*Chairman.*) The name of each distillery?—Yes.

1475. There has been no distinction whatever between pot still and patent still whiskey?—I think not, as far as the Revenue is concerned. As far as the Excise authorities are concerned, it is all spirit.

1476. What are you asking for—I am taking you for the moment as representing the interests of the pot still distiller—what are you asking for as regards the definition of the product? Are you asking that pot still and patent still should be ear-marked differentially?—I should think that the consumer should be told what he is getting.

1477. Take it, if you please, by steps. We have first the distiller sending off his cask?—Yes.

1478. He has the name only?—Yes.

1479. Your name is well known, but it may be, if the name of John Smith appeared, it would not be known whether it was pot still or patent still. Do you wish the two different classes of manufacture to be differentiated, so that it may appear which is pot and which is patent still?—Certainly.

1480. That does not exist at present?—That does not exist at present.

1481. I suppose those are the only two methods of manufacture known now. Of course, patents may come up and you may have fresh methods, but I understand you would have the method of manufacture stated upon the cask as it leaves the distillery?—Certainly.

1482. Now, would you follow that cask. According to your practice, when it goes for consumption, what becomes of it?—It is used in two ways. It is largely bottled, and, of course, it is used for the counter. You sell it out of the cask over the counter.

1483. Let us take the bottle. What would you have put on the bottle—the same as the cask?—Certainly. On the labels it should appear whether it is pot still or not.

1484. That you are asking for?—Yes.

1485. Let me ask your assistance to solve a more difficult question. What are you going to do with your blend?—I do not know whether I am right or not, but the word "blend," to my mind, means the mixture of two pot still whiskies.

1486. That may or may not be. You may have a blend of a pot and patent unless you wish to forbid it?—Well, the word "blend" should be used, to my mind, speaking merely from the point of view of the use of English in this way: when you blend two things it seems to me to mean you mix two things of the same character.

1487. It may or may not. I will substitute for the word "blend" the word "mix." Supposing pot still and patent still are mixed, do you wish that to be designated on the bottle?—Certainly.

1488. Then it is no use designating the fact that it is a blend unless you know the proportion of the blend?—I believe it is due to the consumer undoubtedly that he ought to know.

1489. Know what?—Know the proportion in which the patent is mixed with the pot. The whole value of what he buys depends upon that.

1490. Who is the person who bottles? Take the cask which comes from the distiller. Is it the retail seller, or some middle person, who bottles?—In a good many cases the distiller himself bottles. We do not bottle for home trade, however; we only bottle for export.

1491. The seller of the bottled article, dealing with this quite practically, would have a very great difficulty in knowing whether what was on the bottle was true?—Of course, he would.

1492. Who is to catch the offender in such a transaction?—If the Excise authorities would help us there, something could be done, because a great lot of this bottling is done in bond.

1493. You think that is so?—The particulars of all these mixtures, and everything, are given to the officers, and if they would extend their operations to passing out the thing with a Government guarantee to the public then we would know where we were.

1494. That is in bond, which is more easily dealt with, but I am taking the general public?—It comes out of the bond to the general public.

1495. Is that so in all cases?—Very largely.

1496. I thought only a certain proportion went into bond?—Once the duty is paid it is got into consumption as quickly as possible.

1497. Take the bottle as something tangible to be marked. A customer goes into a bar of a public-house, and says: "I want a glass of whiskey," will you tell the Commission how you would erect any safeguard as to what he is being sold?—The first question he would be asked would be whether he would have "Scotch or Irish."

1498. I agree?—Then if he says "Scotch," I think he should get Scotch whiskey made in Scotland, and in a pot still, and if he asks for Irish whiskey, I hold he should get Irish whiskey.

1499. Scotland takes longer to deal with?—You want me to stick entirely to Ireland?

1500. No, but I want to take your answer as to Scotland a little more in detail. You say if he goes into a public-house and asks for a glass of whiskey, and he is asked whether he would have Scotch or Irish, and assume he says Scotch, you think that he ought to have whiskey made in Scotland—that is to say, the publican ought to know that it is made in Scotland, and also in a pot still? Would you, by that answer, shut out the sale of Scotch patent still?—No, it should be described.

1501. Is the publican to say to the customer: "You have asked for Scotch. Will you have patent still or pot still whiskey?"—I believe the ordinary consumer thinks now he is getting pot still whiskey.

1502. You think the ordinary consumer really knows as much about pot and patent still as we do?—I think now he does know a great deal.

1503. Giving him that knowledge, what would you say? Would the publican be entitled to give him patent still whiskey as whiskey?—I do not think he ought to.

1504. Then you would shut it out altogether?—I think pure patent need hardly be discussed, because I do not think the public would take it.

1505. You are speaking as an Irishman, and you must deal with it from both points of view. Whatever may be the result, you would not allow the patent still whiskey to be sold as whiskey at all?—Certainly not.

1506. May it be sold, according to you, as any other product?—I do not quite understand.

1507. We have heard something about it being called "Spirits." We have heard it called "Spirits," and not whiskey. As you would not allow it to be sold as whiskey, would you forbid it being sold altogether?—Certainly not.

1508. In what name would you sell it?—Spirits—grain spirit.

1509. Grain spirit would be rather awkward?—The name I do not think is so important.

1510. It is; because a man must ask for something, and be supplied with something, and if you will not allow the word "whiskey" to be used he must know what he is getting?—I think nearly all these whiskies now are sold under different people's names.

1511. Does that include patent still as well as pot still?—It does apply.

1512. Then would you allow that to continue?—As long as it was stated on the bottle what was inside the bottle.

1513. The customer over the counter who asks for whiskey does not see the bottle. I am sorry to trouble you with all these details, but we have to deal with them, and they are difficulties which present themselves. I am dealing with a case of a purchaser over the counter. What are you going to do with him?—I think the vessel that contains the so-called whiskey should have on it what is inside it. I do not quite understand what you want me to say. I am rather dense about it, but I do not quite understand your question.

1514. What I wish to present to you is this: that a customer goes into a public-house where he does not see the bottle, and does not see the cask, so that it is a matter of word of mouth. He says: "Give me a glass of whiskey." I want to know from you whether a publican would be entitled to give him a glass of patent still whiskey?—I do not think he ought to.

1515. What ought he to say? Ought he to say: "The whiskey I have got here"—because we hear enormous quantities are made—"is patent still, but I cannot sell it to you because it is not made in a pot still"?—He can sell it, but I think he ought to tell him what it is.

1516. What ought he to tell him?—If he asks for a glass of whiskey he ought to get pot still whiskey. My opinion is—I may be wrong—that that is the only thing that ought to be called whiskey, and if he sells him something which I say ought not to be called whiskey he ought to tell him so.

1517. You are speaking very frankly from your point of view, but do not you know this patent still whiskey has been termed "whiskey" in the trade for a very long time? This would be a novel introduction, would not it?—For years, I should think, after the patent still was first used with the pot still it was undoubtedly a mixture. The patent still was not sold by itself, you know. There was a certain amount of pot still whiskey put into it to give the patent still flavour, and there is no doubt that it was an extremely profitable operation, and then, when it got to the consumer, he was told it was whiskey: there is no doubt about that.

1518. That we have heard. Again as to the blending. If this blending was a mixture, as you wish to have it called—we know the effect it has, according to you, upon the product—can there possibly be found any means by which the consumer can be told the extent of the blend, and how much is one quality, and how much the other?—I can say nothing more than that it ought, as far as the bottle is concerned, to be on the label, and it should be on the cask also.

1519. I am speaking of a word-of-mouth transaction over the counter?—It always has to be—you cannot help that.

1520. It must go by the wind?—It must depend on the honesty of the man who sells it very largely. The consumer is dependent upon that. If a certain thing is legal or illegal he is more or less bound by it.

1521. I understand your point is as to the difference between the cost of production being a great inducement to the retail dealer to sell the patent still product?—For as long as I can remember, and before that, the expense of making whiskey in the pot still has always been held up to us as a mistake on our part. Many persons have come to us and tried to show us how to make our pot still whiskey cheaper, and eventually when the Coffey still was discovered they discovered a cheap method of making the article, which, as we know, can be mixed up with the pot still whiskey, and that produces a cheaper product.

1522. Therefore, it is a great inducement to the retail dealer, assuming he believes he is selling a pure article, to be selling this as whiskey at the same price as he sells the pot still?—Exactly. That is the whole point.

1523. Your point is that you should stop that?—Well, you say: "We wish to stop that." I think it is only fair to say that we personally have never taken any steps in this matter at all.

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1524. I quite understand that?—It was the Islington Borough Council, and we were summoned as witnesses in that case as to how the pot still whiskey should be made, but, personally, our firm have never taken any steps in the matter.

1525. I quite understand that.

1526. (*Mr. Guillemard.*) You have never really moved unless it was your own actual trade mark, or name, which was infringed? Then you would have moved on your name? But you have not moved simply on the question that turns on the name "whiskey"?—We personally have not done so.

1527. I thought that was so. There is one point I want to ask a little more about; that is, with regard to how the Excise could help you. I see your point there. You mean that everything as it leaves bond has to go out with a certain label on it?—Yes.

1528. You suggest "Pot still whiskey" or "Patent spirit," or, I think, you suggested "Mixture"?—Yes.

1529. As it goes out of bond; but there is this difficulty. Say that goes to be blended. That alters the situation at once, does not it?—It does.

1530. The Excise labels become no good?—Except if the operation is done in bond.

1531. But if it is blended outside?—Once it is blended outside, of course not.

1532. A great deal is blended outside, is not it?—I think, if the Government authorities gave a guarantee of that sort, the whole operation would then go on under proper supervision.

1533. What sort of supervision?—Government supervision, because if the public knew there was a Government guarantee, then they would all go for that article.

1534. You mean the public would not willingly drink any article except what had been blended in bond?—I think if they could get a Government guarantee on what they were drinking they would follow the Government guarantee.

1535. It would come to this, would not it? If what you wish were so, it would mean that the public would not touch any blend except the blend that had been made in bond?—I should think it would probably result in that.

1536. Other considerations would come in—I am not expressing any opinion about it—but it would kill a biggish trade. It would kill the outside blending trade, would not it? I do not know whether you are prepared to want to kill the outside blending trade, but I think that would follow?—The word "outside" is the whole point there. It would not interfere with the real trade at all.

1537. I do not think there is any way out of it. It would destroy the blending outside bond if the public got to insist on blending in bond. I think that follows?—It might be a very wise thing to be done, because I think that probably the most dangerous part of the trade is the trade that is done in blending without anybody's knowledge, and without anybody knowing anything about it. I think you would probably get a much better class of spirits.

1538. Then you would be prepared to go so far as to favour that?—I would, certainly.

1539. There is another difficulty, and that is the difficulty that comes from a certain amount of dishonesty. You put the label on in bond, and when it leaves bond it has got a description on it. In the Excise they know very well that in a great number of cases directly you get a cask, or whatever it is, out of bond, the first thing that is done is to alter the label. That is a fact?—Yes.

1540. Labels are very frequently altered out of bond?—Yes.

1541. I am only trying to bring out how far the Government can help you in the way you are suggesting. Can you suggest at all how the Government can prevent that happening?—Well, I think tampering with labels, the removal of one label and the supplying of another, and so on, could be traced, and that the common law would come in and assist us.

1542. You have to prove it?—You have to prove it. Everything lies in that, certainly.

1543. Do you think it would be easy to prove?—That is when bottled in bond and a correct label put on, and when it got out of bond the label being washed off, and another put on?

1544. It is done by people whose interest it is not to be detected in doing it, and do not you think it would be rather difficult to detect?—So far as the patent still spirit is concerned, if they put a label which denoted that there was less patent still in it and more pot, it would be raising the quality of the whiskey as far as the public was concerned. I think that could be got at by analysis. I think the chemist could help us there.

1545. That is just what I was coming to a little later. I suppose you will agree that the only absolute test is the analysis of the article that is given to the consumer. I mean that is the only way of really proving that the proportions are what they are said to be?—I believe so.

1546. Do you think an analyst could detect the proportions at all accurately in a blend? Of course, the analyst could tell pure pot, and he could tell pure patent, and he could tell a blend, but do you think he could test the proportions of blend?—Supposing the spirit comes out with the Excise label on it stating it is a certain thing, and he knows what ought to be in that bottle.

1547. Take an Excise label, stating it is 20 pot and 80 patent?—Take it the other way. Suppose the Excise said it was 50 pot and 50 patent when it got out, and a label was put saying it was 10 patent and 90 pot, or something like that.

1548. Forgive me a minute. You have practically answered my question, because you have put the limits so far apart that they are very easy to detect, I mean if it was correctly labelled in bond 20 pot and 80 patent, and the label was altered to 80 pot and 20 patent, very likely that could be detected; but the difficulty would be to at all accurately detect the medium, the sort of half and half?—You mean that there could be dishonest action in it—I am sure there could.

1549. That is not my point?—Your point is that the chemist could not find it out.

1550. With the ordinary blend you meet with over the counter, do you think an analyst could really detect the proportions in it?—I am quite sure that a certain portion of patent could be put in in such a way that the analyst could not detect it. If he kept within safe limits I think there is no doubt about that.

1551. That is what I was putting?—If I might be allowed to say this about the Excise—it would be a very great help in our export trade if we had some Government supervision. The United States, and all the Colonies, are now going on those very lines, and they are making us sign a statement of the age of our spirits, and so on. If we had a Government guarantee backing up the private guarantee there is not the slightest doubt it would largely help the export trade of this country.

1552. That is getting a little beyond what we are here for, perhaps, but I know you are interested in it. I would like to ask your opinion on the question of compulsory storing, or keeping in bond, whiskey, because I have been reading the Minutes of the 1890-1 Select Committee. I do not think you came before that?—No, I did not.

1553. There were many very well-known traders who came. I think the trade, as far as I know, was very well heard, and leading people on both sides were heard, and I think I am right in saying that the great majority of them at that time had not made up their minds in favour of compulsory bonding of spirits?—Yes.

1554. Have you any views on that?—I think it would be to everybody's advantage if there were a period of compulsory bonding. There could hardly be two opinions about that.

1555. For all spirits, pot and patent?—Certainly.

1556. What exactly would be your reasons for that? What particular advantage would you think would be secured by the storing?—Well, I cannot say much about the patent, but as far as the pot still is concerned there is no doubt that it mellows, and is decidedly a greatly improved spirit by age.

1557. In your opinion, would that be the case with the patent still?—I believe so. I believe that one of the things that probably ought to be guarded against in the mixture is that when you mix patent and fairly new pot, you can sell very new spirits indeed with a sort of flavour about them that cannot be distinguished. The pure pot still must have age to be drinkable, and, as a fact, pot still whiskey is of a considerable age before it is used in practice.

1558. I think the opinion of the trade in 1890-1 was generally to the effect that compulsory bonding would rather unduly restrict the trade. You would not agree with that?—Certainly not.

1559. They took the line that it would mean extra expense, and they also took the line that several things tended to keeping the spirit a long time in bond, one being that it was to the actual interest of the distiller to do it, because it was a good investment—I mean that it paid him to store it?—Yes.

1560. And that he would do it on that account without any legal necessity. That is the pot still people?—Well, I do not think that would apply to the patent still, but it certainly does with the pot still. I certainly do not think it would apply to the patent.

1561. Your view is that the compulsory period should apply to all whiskies, both pot and patent?—It would hardly do to distinguish one from the other in that way, and to inflict a penalty on the pot that you did not put on the patent would hardly be fair.

1562. If the patent does not improve in bond might not you be hitting the patent a little hard by requiring it to be kept in bond, when it was not getting any better?—Well, I suppose in some way it might improve, but I do not know.

1563. I am afraid I must leave it to the chemists to ask that question, as I have not enough knowledge to ask you about it?—I would not like to give any opinion about that, but it would be increasing the anomaly. The pot still now costs a great deal to make and is difficult to sell against a mixture. If you compelled the pot distiller to keep his stuff, and let the patent still distiller do what he pleased, it would make it more difficult.

1564. Have you any suggested limit of years for compulsory bonding?—I think it ought to be kept for three years at least. I am sure if you were to inquire from distillers of my acquaintance they would tell you that practically all spirit they know of of theirs is certainly three years old before it goes into consumption to any extent at all.

1565. We shall have other witnesses, of course, on this, but have you any idea how far you, speaking for the pot still trade, can recommend compulsory bonding? Do you think they would go with you as a whole?—I think that the practice of the pot still trade, as far as I know it, is that they already keep it for such a time that it will make very little difference to them. I think the practice of the trade is to keep pot still whiskey for about three years.

1566. You think as a trade they would be in favour of compulsory bonding—the pot stillers?—I believe they would.

1567. There is only one other point. I see in the conclusion of your summary of evidence you make certain recommendations in the general interest of the consumer, in the interest of the public health and of the legitimate trade. In giving your evidence you have said a good deal about the interests of the consumer and of the trade; but how, exactly, would your recommendations conduce to the public health?—Well, largely in the ageing of it. As far as the age part of it goes, I think at present the very inferior whiskies that are sold cheaply are where fairly new pot whiskey is mixed with patent, so creating a strong raw sort of spirit. The two can be made so that you can disguise the flavour in a way, and it makes a very raw spirit. I think in that way, undoubtedly, by putting on the age clause, you could prevent that, and especially also by the statement to the public of what they are getting.

1568. That has nothing to do with the public health?—I think it has.

1569. I did not mean to contradict you, but I want to see the way in which the public health can be benefited?—In that way, that I think if the statement was on the bottle, or the cask, that it was new, or that there was a certain amount of patent mixed with so much of the pot, it would stop a lot of these very low class spirits being sold.

1570. Then the only point in which you lay stress on the public health is the age of the spirit as distinguished from the materials or processes? You do not contend that as a process the pot still produces an article that is better for the public health than the patent still? It is only the age and the time it is kept?—I think so; but I do not like to put that forward because there is no use talking about a thing when it is only my opinion. There is no use bringing that in as evidence.

1571. (*Dr. Cushny.*) Several witnesses have talked about the line arm: could you give us some description of what the line arm is?—There is the still *here*, the line arm would come in behind that screen. Suppose the whiskey comes up *here*—this is the worm—going off to the worm top, on this piece of it *here* there is a thickening which lies in a tank, a long narrow tank, which may be about the length of from *here* to the end of the room; and *this* part of the arm is thickened and from that there is a small pipe that runs back in here into the still. But I think that the reason of that is more because of the lift of the materials in the still. There is a great mass of 18,000 or 20,000 gallons of stuff raised to a boiling temperature, and that ebullition would force some of the material itself, instead of the spirit over. I think the line arm is merely a thing to catch that, as far as one can know what it is there for. I should doubt if anybody knows. It has always been there.

1572. It is a little similar to some dodges we have in the chemical laboratories for fractional distillation?—No, there could not be anything of that kind, because it is a very little thing compared with the whole affair. Nothing of that sort could go on. It is merely to keep things, that should not come over, in a mechanical way, I think. There could be nothing else in it. With the amount of stuff that is being dealt with, what could go on in this little thing, in the length of the whole worm? It would be practically impossible for it to be anything in the way of fractionation. I do not like to speak as a chemist, but I think anybody would know that a little thing like that, in that length of worm, and at the top of the still, can have practically no effect whatever.

1573. There is another point which I am not quite clear upon, and that is when the foreshotts return to the still in the pot still?—In our pot still, it is hardly what are called foreshotts. What are called foreshotts is the first spirit that really comes over the still, and is supposed to be good for rheumatism and that sort of thing; but in the distillery it is called No. 1 low wines and No. 2 low wines; and then when they are redistilled they are called No. 1 feints and No. 2 feints, and then they go into the spirit still and the spirit comes off. But how do you mean? I do not quite know which is the foreshott you mean?

1574. Well, the first part of the distillate that comes over is not called whiskey, and does not go into the whiskey cask?—No, the wash is put into the wash still and the first part of the distillate that comes over is called No. 1 low wines, and the second part is called No. 2 low wines; and then, that being distilled is called No. 1 feints and No. 2 feints; and then in the next distillation, in the spirit still the first lot that comes off has to be left back and to go on always from distillation to distillation. After the first lot comes off, then comes the whiskey for a certain time, and then comes off a certain quantity more that cannot be taken off as whiskey, and that goes back and is redistilled over, and over, and over again.

1575. Is not there a certain fractionation there?—That is chemistry. I think not. I really could not tell you.

1576. Who could tell us that? I mean to say it is a point that several witnesses have spoken of, and I must say I have not got a clear idea whether this division into feints and into whiskey is really fractionation, or whether it really all goes back, or what comes out?—It is all distilled over and over again and the product always retains the flavours, that is all I can say about it. If we alter the materials of our mash we give away entirely the flavour.

1577. That I can quite understand, but that does not answer the question whether there is not fraction-

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ation actually in an ordinary pot still. Another point was as to this statement of yours that the direct action of fire heat produces flavours. Is that simply a matter of opinion, or is that chemical?—That is a matter of belief and opinion.

1578. It is a matter of belief?—I believe we would never risk using steam jackets. We believe we would alter the flavour, but the experiment would be such a costly one that we would never try to make it.

1579. That is what I wanted to know?—Of course that is my belief.

1580. (*Dr. Horace T. Brown.*) You said in your *précis* that your distillery, since its foundation, has made only one kind of whiskey, namely, pot still. I suppose you do not imply there is another kind of whiskey which is not derived from the pot still?—I see the point. Of course, that is so.

1581. You speak of "only one kind of whiskey." You have only produced one kind of whiskey, namely, that from a pot still. Do you mean to say that anything which is not made by pot still may still be called whiskey?—That is one way of putting it—I think not.

1582. It is possibly a slip in your *précis*?—I should say decidedly so, looking at it in that way.

1583. I see you have somewhat extended the definition of Irish whiskey given to us by Mr. Bramall by adding that it is the product of a series of distillations—two or three distillations?—Yes. It would not be whiskey if it was only one distillation.

1584. You would regard that part of the definition as essential?—Yes.

1585. You would put out of Court any still, pot or otherwise, which would produce whiskey at one operation?—I would.

1586. I do not want to ask you any questions which involve trade secrets, and you must stop me if I do so, but you said your firm uses materials of the best native quality which money can buy. Does that mean grain grown exclusively in Ireland?—No, it does not. As a rule, we do. Wherever we can get sufficient corn of the quality we want, we buy all Irish, because we do believe—I do not know whether we are right or not—that the flavour of the whiskey depends also upon its being mainly made out of Irish grain. That is our firm belief. I believe that if we were to take barley grown in England, and barley grown in Scotland, that it would alter the flavour of the whiskey; but, of course, the main bulk of the stuff comes from our own districts that we know of, but we have often in bad years been obliged to come over here. There may be a bad harvest over there, and we cannot get enough of the high quality grain. That is the only reason that makes us come over, because the quality is very essential.

1587. Do you mind telling us if you use any foreign grain of any kind?—Never that I have known, never in my time.

1588. It is all either Irish, English or Scotch?—We have used Scotch barley, and we have used English barley, and I do not think we ever used any Scotch oats; it is nearly always Irish oats—I am sure it is. But rye is a very difficult thing to buy nowadays grown in Ireland. There is very little of it grown, very little of it indeed.

1589. Do you know whether maize is ever used by the Irish distillers as part of their grist?—I should say not; I do not know. But I never knew of any pot still distillery in Ireland using it.

1590. You would deny the name of whiskey to any pot still distilled spirit which was in part derived from maize?—No, I would not. As long as he uses the pot still the flavour of maize will be there, and he will have to sell his whiskey on its merits.

1591. You would not deny the use of maize altogether?—No, if he likes to use maize; because if he uses his pot still his whiskey will have the flavour of maize and everybody will know it.

1592. Then I misunderstood you, and I am sorry for that. I was going to point out we had it in evidence from Mr. Tedder on the first day that a certain amount of maize was used in Scotland in some distilleries?—There is no reason why it should not be, but it will carry its own character on the face of it.

1593. You have stated that the main ingredient of the materials used for Irish whiskey is malt?—Yes.

1594. Barley-malt and unmalted grain being in varied proportions?—Yes.

1595. Are we to understand that of all Irish distillers—I am not speaking of you especially?—Certainly.

1596. That Irish distillers never use less than 50 per cent. of barley-malt?—I did not say they used 50 per cent. I hope I did not.

1597. You said in the main. Your words are: "The main ingredients of the materials used for Irish whiskey are barley-malt." I think that is how it runs. "The main ingredient has always been barley-malt"?—Did I say we used 50 per cent. of barley-malt? I hope I did not.

1598. You said "The main ingredient," and I thought you meant by that you used at least 50 per cent. We had it also from Mr. Bramall that not less than 50 per cent. was used. Your words would rather imply that, would they not—"the main ingredient"?—Could the shorthand writer tell me what I said, because I should like to know about that?

1599. I have your *précis*—"The main ingredient has always been barley-malt." By that I thought you meant you always used 50 per cent. at least of barley-malt?—Oh, no.

1600. I beg your pardon. (*Chairman.*) Just tell us what you do mean by that?—What I mean by what?

1601. What you mean by what has been read to you—"The main ingredient is barley-malt." What do you mean is the main ingredient? Do you mean in proportion to others, or in actual superiority of ingredients?—In proportion to the rest.

1602. Will you give us an example of what you mean by that?—The largest quantity of any one material in would be barley-malt; but also in this, that the thing on which everything depends is the barley-malt. The quality of the material—the quality as produced—the thing to which we look mainly as making the whiskey what it is, is the barley-malt; but I do not mean to say for a moment that we call our whiskey malt whiskey.

1603. (*Dr. Horace T. Brown.*) Supposing the distiller is using 30 or 33 or 35 per cent. of barley-malt, can you call that the main ingredient of his grist?—It would be, if he used half a dozen other things, none of which were 33 per cent

1604. You do not mean the main ingredient as regards the whole grist?—No. I see your point now. I did not understand it before. You mean that there was more barley-malt in the mash than all the rest put together?

1605. That is what I gathered?—Yes. If my words can be taken to mean that, that is not what I meant them to mean.

1606. That was my impression?—I should like to be quite clear about that. I have no idea of any way of trying to mislead you as to what I mean.

1607. Certainly not. I think you have told us also in your *précis* that the patent still spirit has come into use during the last 40 years, and that during practically the whole of that time this has been without the knowledge of the consumer?—Yes, that is my belief.

1608. I was going to ask a question with regard to a pamphlet which I see was issued by your firm somewhere about the year 1876 in conjunction with three other Dublin distillers. Did you, in issuing that pamphlet, call public attention to the mixture of patent still with pot still?—I daresay we did. It was long before my time. If you have it you will probably know.

1609. I have not the original pamphlet, but I have the second book which was published, I think, in 1878, entitled: "Truths about Whiskey." In that book, I think at page 12, you refer to a pamphlet which had been issued a few years previously, in which you call fuller attention to this use of the patent still spirit by the blenders of Irish whiskies, denouncing this blending as a fraud on the public?—Yes.

1610. At page 12 I see you state that a previous pamphlet, with extracts from newspapers, had been

very widely circulated, and the effect of that soon became apparent. Does that mean that the practice of blending diminished after the issue of the first pamphlet? Have you any reason to believe it had any distinct effect?—Personally, I really could not give you any information about that. That pamphlet was published long before my time, and I really have no knowledge about it whatever. It would be no use my answering any question about it, because I do not know, really. At the date of that pamphlet I had nothing to do with distilling, and I did not know anything about it, and I do not know really anything as to what their grounds were. I am afraid that is a point I could not give any information about. I would be very glad to answer the question if I could.

1611. Your firm has consistently opposed the sale of Irish whiskey containing any product of the patent still?—We always have done.

1612. Do you not think that the public was to a certain extent informed on this question of blending by that pamphlet, and also by this little book of yours called "Truths about Whiskey"?—I suppose they were, but what amount of information it gave I really do not know. I could not give you any particulars as to what extent they published it, or what they did.

1613. So that it is perhaps not quite accurate to say: "During the last forty years in which the blending of the patent spirit with the pot spirit has existed the practice has been going on without the knowledge of the consumer"?—As far as that pamphlet is concerned, I should say the statement is quite correct. I do not suppose one consumer in a hundred ever saw the pamphlet, or heard of it.

1614. Or this book?—Or that book; I should say not. I really do not know, but I should doubt very much if anybody ever did. I am just merely expressing an opinion as an ordinary member of the public. I do not know anything about that.

1615. You do not think it is sufficient of itself?—I do not think it was advertised, or pushed, or brought before the public in any way which would let the ordinary consumer know anything about it. As far as I know I do not think so. I have heard some talk about that publication, but I know very little about it.

1616. You regard the product of the patent still as a neutral or silent spirit?—Yes.

1617. And the improvement effected by age on patent spirit is, to quote your own words, "extremely slight"?—I believe so.

1618. I should like to ask you, in conjunction with that statement, some questions about the increase in value of pot still whiskey at various ages as compared with the value of patent still spirits of a similar age. In the first place, I will take the figures you have given us in your *précis*, where you start with your new whiskey at 5s. per gallon?—Yes.

1619. In two years' time that has increased to 7s. 3d. per gallon—an increase of 2s. 3d. in two years—being an increase of 45 per cent. on its original value?—Yes.

1620. In seven years it has increased by 126 per cent. on its original value?—Yes.

1621. And in fifteen years by 211 per cent. according to those figures?—Those are facts.

1622. You start with the price of patent still spirit at 1s. per gallon proof, and you state that, as far as you are aware, no patent still spirit kept for any length of time reaches a figure of more than 5s. per gallon?—I believe that is so.

1623. That is an increase of 4s. per gallon, or 400 per cent. on the original price?—Yes. I should say that 5s. for patent still spirit is a very high price. I should doubt if there is much of it sold at such a figure.

1624. I quite agree?—I am merely quoting there from a very, very large figure. I do not wish in any way to appear to make a statement against the patent still spirit as to its ultimate price, because I am sure the Commission will have evidence as to what the patent still spirit is sold at in the trade.

1625. It is not, perhaps, fair to take your figures, especially as your whiskey is of a very special make?—I think all pot still whiskies rise very considerably in price as their age goes on.

1626. Pot still?—Pot still.

1627. I should like to ask you a few more questions on that point. Do you know the evidence on this particular subject which was given before the Select Committee of 1890-91 by Mr. John McGilchrist Ross, of the North of Scotland Distillers' Association?—No, I have no knowledge about that.

1628. I think it is in answer to Questions 1939 and 1940, on page 17 of the Report. Mr. Ross, in answer to certain questions, said that malt whiskey rises in price from 4d. to 6d. per gallon per annum on the original gauge, and that grain spirit advances 2d. per gallon per annum up to six years old. Do you agree with that in general terms?—As regards the patent, I have very little knowledge about the patent. I should think the Commission would get far more reliable information about the patent still prices from somebody who knew more about it than I do, but it is certainly not overstating the case to say that pot still whiskey rises by 6d. a gallon per annum.

1629. 4d. to 6d.?—Certainly.

1630. So that we may take 5d. as an average?—Yes, but that is for a lot of different classes of pot still whiskies.

1631. Assuming the grain spirit does increase at the rate of 2d. per gallon per annum, it is rather interesting to see the relative rise of price of the two in the course of four, five, or six years?—But then you have got a different starting point.

1632. Yes, we have a different starting point, but in considering the relative costs we ought to take the percentage upon the initial value in both cases, ought we not? We start, for instance, with a malt pot still whiskey at 3s. 6d. That would increase in the second year to 3s. 11d., 4s. 4d. in the third year, and so on up to 5s. 7d. in the sixth year. Then the advances per cent. upon the original cost come out as follows: In the second year a 12 per cent. advance, in the third year 24 per cent., in the fourth year 35 per cent., in the fifth year 47 per cent., and in the sixth year 60 per cent.?—Yes.

1633. If we start with the grain spirit at a shilling per gallon, the percentage advances in the second, third, fourth, fifth and sixth years to 16 per cent., 33 per cent., 50 per cent., 66 per cent., and 83 per cent., so that if those *data* are correct, the price of the grain spirit advances in a more rapid ratio than that of the pot still spirit?—But granting even that that is so, which, of course, as far as the ordinary trade is concerned would have to be compared with what the real prices on the market are, still the patent remains very largely lower in price than the pot.

1634. There is a difference of 2s. 6d. a gallon on those prices, taking the pot still at 3s. 6d. and the grain spirit at a shilling, but in estimating the relative rise of quality, as tested by price, surely we must take it as a percentage value on the initial cost in each case, must we not?—Yes; but as I said, I do not like to say anything about patent. If I were asked my opinion, I would say that patent still spirit gets, it may be, up to 2s. or 2s. 6d. or 3s., and you can always put it at that figure, and goes no higher, but I should doubt very much——

1635. We have Mr. Ross's evidence on this?—I do not like to discuss the point, because I really know very little about it.

1636. Would you accept a current price list, such as I have here, as a test on the subject? I have taken out some three or four Scotch whiskies here and compared them with patent still products at differences of four years, four years apart?—Yes.

1637. I find that the average increase in four years of the three Scotch whiskies is exactly 22 per cent.?—Are those patent still whiskies?

1638. No, they are pot still whiskies; Glendallan (Glen Livet), Glen Rothes, Highland Park?—Yes.

1639. The advance in four years on the original cost averages 22 per cent. Taking the Irish grain from the same price list, I find that has increased in four years 26 per cent. on its original price, and the Scotch grain in three years by 20 per cent. on its original price?—I should say all those increases

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occur probably in the first few years. Could you find any instance where the grain spirit has increased much in price after it is three years old?

1640. My information does not go as far as that. I have taken the longest periods I could?—That would probably apply to patent still. I should say this increase of value would occur at the very early periods of its age, and then probably cease altogether.

1641. Do you think those figures bear out your contention that the improvement effected by age on the patent still is "extremely slight," to use your own words?—Regarded from the pot still distiller's point of view certainly, because, as I say, the ages that you are talking about, the two and three years, for whiskey, in a pot still distiller's eye, are of no importance. We do not think that our whiskey should be used at those ages at all.

1642. In the first place, I am taking your own figures in which you state that the patent still product which originally cost 1s. may go up in value to 5s., which is a rise of 400 per cent. in a certain period; and I find that your own whiskies, according to your own showing, only rise in 15 years by 211 per cent.—that is an advance in price of 211 per cent.?—As it gets older it steadily increases in price, and that does not occur with the patent. I am merely stating what I am sure the Commission will get in evidence from other sources much better informed about the patent than I am. The pot still whiskey, as it gets older up to 15 years of age, goes steadily increasing in price, and the patent gets its increase in price during the first years of its existence, and then I should think, remains practically steady. If the information I have is correct it is better not to keep patent still too long.

1643. It is very unusual to keep pot still whiskey for 15 years, is not it?—Yes, because it gets very expensive and it is a very great luxury.

1644. Is most of the pot still whiskey sold in three, four, or five years?—An immense amount of our manufacture is sold seven, eight, or nine years after—largely seven years.

1645. I am speaking of Irish whiskey generally. I am not talking about your own especially?—I believe there is very little Irish whiskey sold in Ireland much under five years old.

1646. Five years?—I think so.

1647. That is almost within the period of improvement of patent still spirit, because you say it improves up to four or five years?—I do not really wish to be taken as expressing any opinion on patent still improvement. My own opinion, if you ask me what I think, is that it improves very, very little.

1648. You have stated that in your *précis*, and that is the reason why I questioned you about it. It seemed to me that was scarcely borne out by the differences of price. We have only, at the present time, to consider the quality of the spirit at various ages by the price lists?—If you start with the patent at 1s. a gallon and put 2d. a gallon on it it only gets at the end of three years up to 1s. 6d.

1649. That is a 50 per cent. increase on the original cost?—Yes; but still, that is a very cheap article.

1650. You do not make a point of fire heat under the pot still?—I do, as far as belief goes.

1651. But you would not bring that into the definition in any way? You would not state that pot still whiskey could not be produced without a fire?—Well, if it was made by a steam jacket; but if naked steam is let into the mixture, then I say that a difference occurs. I do not think it would be correct to call it whiskey so long as the spirit is taken off by the use of naked steam.

1652. Anything like a steam jacket put into a pot still would entirely——?—Would entirely alter its character.

1653. Would entirely alter the flavour and bring it outside your definition?—Yes, it would.

1654. Then that is another little extension we must have of the definition. Your second definition of whiskey is that it is not only the pot still, but the particular method?—It all comes back to the pot still. I do not think you could use naked steam in the pot still. As long as you use the one instrument it settles the question.

1655. There is one question I was going to ask you which has been to some extent anticipated, with regard to your suggestion as to putting the spirits into bond. You consider, as regards Irish whiskey, that it is desirable from the point of view of public health, amongst other things; but you do not mean to say, I suppose, that the new Irish whiskies, apart from flavour, are in any way injurious to health?—Again I say I do not know much about the patent, but I do not think it is a good thing for people to drink new spirits. It is far better for the public health if they are matured.

1656. Would they take pot still whiskey new—would the public consume such a thing; it is not a pleasant thing, is it?—As a matter of fact, they do not.

1657. They do not?—No.

1658. That is a question of flavour?—It must be so.

1659. Is not that of itself a sufficient safeguard?—No, because if you mix new pot with some patent you can get quite a drinkable thing that can be drunk, but if you keep the pot by itself they will not drink it new. If you take some patent still spirit and mix it with raw new pot still spirit you can get something which is quite saleable as a cheap common spirit, but I should say by no means good for the public health.

1660. On account of the new pot still whiskey in it?—Being disguised by the patent.

1661. Which is the injurious ingredient there, the pot still or the patent?—If it is new patent and new pot both are not very good; they would be much better kept.

1662. Do you think that applies to the patent spirit as much as to the pot still spirit?—I do not think it applies as much, but I should say it does to a certain extent. I would like somebody to speak about patent who really knows it.

1663. You have described grain spirit as being practically silent spirit, unalterable, and I cannot quite see on what ground you would demand that this patent spirit should be put on the same terms with regard to bonding as the pot still whiskey, which requires maturing?—You mean that because I hold that it does not improve therefore it should not be kept in bond?

1664. With what object would you suggest that it should be kept in bond if it is something which does not improve or does not alter in any way?—I would not go the length of saying that it does not alter in any way, because apparently it alters to the tune of 2d. per gallon, per annum, in the opinion of the people who pay for it; therefore, there must be some sort of alteration.

1665. (*Dr. Adeney.*) It is important for the Commission to have as clear a differentiation of the pot still process as possible, so you will forgive me for going a little into the detail, it will not be unreasonable detail, of your process. Could you describe, in the broadest outline, the features of your distillation process?—Beginning with the mash?

1666. No, with the wash?—Do you mean when the wash is put into the fermenting tun, and then fermentation—from that part of the process?

1667. Yes?—The contents of the fermenting back, as it is called, are run into the wash still, and there it is distilled over the first distillation. The first part of the distillation is called No. 1 low wines, and the second part is called No. 2 low wines.

1668. That is, you separate the distillate into two portions?—Into two portions.

1669. Is there any distinctive difference between those two portions of the distillate?—In the strength. Up to a certain strength, it is called No. 1 low wines, and then after that certain strength it is called No. 2.

1670. No. 1 being stronger in alcohol?—No. 1 being stronger in alcohol than No. 2. Then in the feint still the low wines are distilled—I am giving a very general description.

1671. That is all I want?—In the feint still the low wines are distilled into No. 1 and No. 2 feints.

1672. What is the difference between No. 1 and No. 2 feints?—Again the strength.

1673. No. 1 being stronger in alcohol?—Yes, and in the spirit still there is a mixture of No. 1 and No. 2 feints, and a certain portion of that goes off again as No. 1 or No. 2 feints, but the central part of them is spirit—it is the whiskey.

1674. (*Dr. Horace T. Brown.*) That is the second distillation?—No, the third distillation. That is a very general description of the three distillations it goes through.

1675. (*Dr. Adeney.*) So that in those processes of distillation, in your first process you get the separation of the two portions of the distillate, one stronger than the other in alcohol?—Yes.

1676. In your next you get feints and whiskey—do I follow you correctly?—No; in the second process it is only feints.

1677. In the third process you get feints and whiskey?—Yes.

1678. Is not that a process of fractionation?—That is a question that really I am not enough of a chemist to answer.

1679. Speaking from a commonsense standpoint, taking your three processes?—How do you define the word "fractionation," and then I can answer.

1680. You have the distillate; if you take the whole distillate from your three processes of distillation, and you divide that distillate into three fractions, three parts?—Yes.

1681. Those three parts are fractions of the whole?—Yes.

1682. The first fraction goes off at the lowest temperature?—Yes.

1683. The last fraction goes off at the highest temperature to which the contents of your still is taken?—Yes.

1684. The whiskey then comes off in the middle temperature?—Yes.

1685. Is not that what a scientific man understands by fractionation?—You think that fractionation is a mere separation into different parts, not a break-up into its constituent parts?

1686. I will not say that entirely, but the fractionation consists of separate portions of your distillate, each given off at different temperatures?—Certainly, if that is fractionation, of course we do it—if that is all that is meant by fractionation.

1687. Then those different fractions have different compositions?—Yes, if that is all that is meant by fractionation. We certainly break it up into different parts, there is no doubt about that.

1688. So far as the pot still acting as a fractionising or rectifying still is concerned, I can understand the explanation that one of the objects of the line arm, as you have told us, is to throw back particles of liquid thrown up by ebullition into the still?—Yes.

1689. But how does the level of that line arm run?—Just where I have shown you on the stand.

1690. Does the level incline backwards to the still?—No, I thought I explained that there is a small pipe from the bottom of the line arm which runs back into the still.

1691. And that drains that bit?—That drains that bit; it is a little bit of pipe that runs back.

1692. But it really drains it?—Yes; supposing that anything really did come over into that, it would go back into the still.

1693. Also if any vapour were condensed it would go back?—The tank that it is in is a very small thing which merely holds a pipe and has very little water round it, and as a matter of fact the water that is round the line arm is so hot with this enormous great pipe in it that practically nothing in the way of condensation worth speaking of could go on.

1694. What do you mean by "so hot," in actual degree of temperature?—Well, you could hardly put your hand into it; it is up to so high a temperature that the spirit, or whatever is coming off the still at that point, is very, very hot, and to effect any real cooling there you would have to have an immense volume of water.

1695. I understand that?—There is very little going on in that part. That is what makes me think it can never be there with any purpose, except to catch something which will deposit itself without the cooling process.

1696. I understand that you do not wish to produce any great condensation there?—No.

1697. But my point is that some bodies of a higher boiling point would be, as a matter of fact, condensed there?—It may be so. Nobody could argue about it. The vessel is so big, and the volume of stuff going through so great that I do not know how you could find out what is chemically going on there. Without any real and accurate knowledge I should not like to express any opinion, and I do not think anybody could say what goes on.

1698. I think I may assume that there is some fractionation?—I could not argue against the assumption, but I do not know on what grounds you could base it there.

1699. You have three spirit fractions coming off at different varying temperatures, and then you have three processes of distillation, all of which must tend to separate your products into classes of bodies having different temperatures and boiling points?—Yes, but the one thing about the whole business is that, whatever fractionation might go on, still the method preserves the original flavours.

1700. May I put this question to you: The pot still separates all the undesirable products from the spirits?—That is what we believe.

1701. Have you found by experience that fractionation can be practically carried out by the apparatus that is employed?—The expense of these three distillations is very considerable, and I have not the slightest doubt that it is done to eliminate what would make bad liquor, what would not be good.

1702. You want to get a good liquor, and you use utensils and processes which experience has taught you you can use?—That is it.

1703. To that extent your apparatus does act as a fractionising or rectifying apparatus?—There you have the advantage of me. I could not express an opinion, as far as a term of that sort is concerned, that would be of the least value in chemistry; but the practical result is what you are now stating, as far as I know.

1704. Can you tell me what is the primary object of collecting feints and returning them to the stills over and over again. Is that necessary for obtaining the flavour of the spirit in the succeeding cycle of operations?—I think the different distillations succeeding each other must be to get rid of things they do not want.

1705. You are not controlled largely by Excise regulations?—The Excise do not meddle with that part of the thing. Everything is under Excise lock and key, but they do not interfere with our processes of manufacturing in any way.

1706. Do these feints grow upon you during the season's work?—No.

1707. What is your explanation that they do not?—They never disappear. I believe at one time they used to go on distilling until they had no feints left, but now we carry feints No. 1 and feints No. 2 always; they never disappear.

1708. From season to season?—From season to season.

1709. You never run them off?—We never run them off.

1710. So that whatever waste products are run off, are run off with the wash?—With the spent wash in the first distillation.

1711. Have you any knowledge of the chemical changes these feints go through in this process?—No.

1712. During the redistillation?—No, I could not give you any exact evidence of that sort. As a matter of fact, in the distillery we have all one product, and we have tried to stereotype the processes which have been handed down to us that produce that product; and as regards the mash, and the chemistry and the science of malting and drying the corn and everything of that sort, we use the chemistry as much as we can, but as to the actual process of distilling, we would never depart from what has been handed down to us.

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1713. I can understand that, but would you let me suggest to you that, so far as the principle is concerned, there is no great difference in principle in the distillation process in the pot still and in the patent still. Is not it really a matter of degree?—You could not make whiskey in a patent still—I say you cannot make whiskey at all—but you could not make a thing with the well-known flavour of whiskey in a patent still.

1714. Are you quite sure of that?—Well.

1715. Has it ever been tried?—I am sure it would have been tried if they could have done it, because it is so much cheaper. I am quite certain in these years that have gone since 1831, if you could make a first-class pot still whiskey in a patent still by that process it would have been done long ago.

1716. May I suggest to you that the energies of the patent still distiller have been wholly occupied in producing a spirit which has got a ready market?—I did not quite catch that.

1717. The demand for the spirit which they have produced has been quite equal to the supply, and therefore the patent still distillers have not been called upon to go into any refinement. Do I make myself plain to you?—I see the point. But suppose we take it that there had been no pot stills, that there had never been pot still whiskey, and the first still that was invented was a Coffey still, and the world had been given whiskey from the Coffey still, and that had been called whiskey and there had been no pot still whiskey to mix with it or give it flavour, I do not think there would be much whiskey sold in the world.

1718. Let me put it in another way: Suppose the public taste had suddenly altered and a universal demand were made for pot still whiskey, do you think it would be beyond the reach of science to produce whiskey similar in flavour to the whiskey produced in the pot still from a patent still? Do you think that would be utterly beyond the reach of practical science?—I hardly like to express an opinion before scientific men as to what science could do, but I know for many years scientific men have been trying to show us how to improve our whiskey and cheapen our manufacture, but they have never been able to show us.

1719. You have not given them a great deal of encouragement to help you? You have not given them so much encouragement as the brewers have in recent years?—No, perhaps we are prejudiced. I daresay we are, but I think the patent still people who are now getting 1s. or 1s. 6d. a gallon, if they could have produced a stuff which would have given them 5s. a gallon without buying it from a pot still distillery, would have done it long ago.

1720. You may be quite right, but what I want to lead up to is this: Do you think, having regard to the possibilities of scientific improvement, that your definition of whiskey really would be a protective one now; that is to say, if the patent still distillers were pushed and did produce an article exactly similar in flavour to the pot still whiskey, and a spirit equal in quality—if they did that, would you be protected?—Supposing they did, what harm would it do to anybody as long as they stated what people were getting?

1721. It seemed to me that then they could undersell you?—They are doing it very largely at this minute.

1722. They are not producing the same spirit?—Our contention is that a bottle is put down called "Irish Whiskey" and half of it is patent still stuff produced at 1s. a gallon; and we say it should be Irish pot still whiskey produced at 3s. or 4s. a gallon.

1723. That is the present state of things?—Yes, the underselling is going on.

1724. I take it your firm have no difficulty whatever in selling the seven-year-old and upwards whiskey which you produce. It is a coveted article in the trade?—I would rather not answer that sort of question. That is dealing with it from a trade point of view, which I do not think it is fair for me to say anything about.

1725. Perhaps you will forgive me asking it?—I would rather keep away from meddling with trade reputations and things of that sort personally.

1726. Your definition is a protective one, and in the present state of our knowledge I wanted to ask you whether you had considered where you would be if any great improvement occurred in the process of producing patent still spirit, so that the use of a patent still could produce highly-flavoured whiskey?—If the patent still spirit, which had to be sold to the public as patent still spirit, enormously improved in quality, and came to be equal to the quality of pot still spirit, I think the public would have gained very largely, and we would only have to take care of ourselves.

1727. I would like to ask you one or two questions to get to closer quarters as to the differentiation between patent still spirit and silent spirit; you do not regard those as synonymous terms yourself?—Very nearly. I think on the silence of patent still spirit depends its value.

1728. Have you seen any analyses of patent still spirit? There are some published?—Yes, I have seen analyses of them.

1729. Have you those in your mind?—I have to a certain extent; but I am not sufficient of a chemist to carry the proportions in my head; but what my recollection goes back to is that there are certain so-called impurities which appear more or less in the patent still spirit, but there is a very much less proportion of them than in the pot still spirits.

1730. As to these bye-products, we have been told by a former witness that there are patent still spirits to be got in the market which contain nearly as much secondary products as the pot still: What would you say about those?—I would like to know the man who made them.

1731. We were told that Cambus was one, I think, as far as I remember?—I would like to see the Cambus distiller produced, and have his statement of it. I would not like to talk about another distiller, really.

1732. Would you accept from me that I have myself examined patent still spirits, the origin of which I could detect?—Yes.

1733. That is a very different thing from silent spirit; as to silent spirit, no chemist would pretend to state its origin?—I am sure from the size of the process that it is not—the bye-products are there to a certain extent.

1734. As to such patent spirits as I refer to, it would not be fair to call them silent spirits?—I daresay you are right. I am quite certain that you are talking from knowledge, and, as I have said, I have not sufficient knowledge, and I would not like to give evidence upon such a point.

1735. You will forgive me putting such a question, but it is very important that we should get clear ideas on these different terms?—Certainly.

1736. There is one last question I should like to ask you. Have you heard any objection on the part of the general consumer against what I would call less matured pot still spirits?—I have, undoubtedly.

1737. Do you think it would be legitimate to render this more to the taste of the general consumer by adding mixture with patent still spirit?—I think it would be much better for the general consumer if you made the pot still distiller keep them until they were fit to drink, instead of mixing them with patent spirit so as to sell them a bit too early.

1738. Would he necessarily have to pay a higher price?—He would, of course. Well, as far as the ordinary consumer is concerned, I do not think he would have to pay a higher price. The man who consumes the stuff would get a better value, but I do not think he would pay a farthing more.

1739. You mean to say the man who asks for a glass of whiskey at a public-house pays a price which would make him expect to get properly matured pot still whiskey?—That is my belief.

1740. (*Mr. J. Y. Buchanan.*) I only want to ask you one or two questions as we have already heard a good deal of what I had noted down. Patent still whiskey is, you admit, more nearly pure alcohol than the pot still?—I believe so.

1741. That contains, therefore, very much less of the secondary products?—That is my belief.

1742. It is the secondary products which, in your opinion, give the peculiar flavour, and the peculiar taste, to the Irish whiskey?—That is my belief.

1743. And they are capable of improvement from the flavour point of view by keeping?—Yes.

1744. That is the reason you think that Irish whiskey ought not be drunk before it is 7 or 8 years old?—7 or 8 is rather too many.

1745. At any rate, a number of years?—Some years.

1746. Say 5 or 6?—Yes.

1747. Whereas the patent still whiskey, having so very small an amount of these secondary products, can be matured in a much shorter time; so that the patent still whiskey, so far as health is concerned, would be drinkable in a much shorter time than the pot still whiskey. Do you think that?—I would not like to be taken as giving that opinion. I do not think that any spirit can be as good new as if it is kept for some time.

1748. You do not advance the opinion that alcohol—that is to say, ethylic alcohol, is altered in any way by keeping? It is only these so-called secondary products, which are usually very well defined?—Yes.

1749. Are what you call the "products" due more or less to the burning of the spirit?—Yes.

1750. It is they that require the mellowing by maturing?—Yes, that is my belief.

1751. I think it is a legitimate conclusion that, where there is less of them, then what is deleterious in those is got rid of quicker, and therefore the patent still whiskey could not be objected to on the ground of injuriousness?—I should hardly like to give an opinion on that subject. I see your line of reasoning, and as far as it goes I have no doubt you are right, but whether or not new patent still is good for the public health is a thing I would not like to give an opinion about.

1752. In the various pot still distilleries is there a great difference in the amount of what one may call these burnt products in different whiskies of real pot still?—In any analyses that I have seen there has not been a very great deal of difference, but then, talking as a chemist, I should say, of course, that there is a difference, because the quantity you are dealing with is so very small that any little difference amounts to a good deal.

1753. Might not palatable whiskey be produced by a patent still and kept a short time, and more highly burnt pot still whiskey of a similar amount be added so as to bring the composition of the spirit up to the same thing, and be produced in a shorter time, and therefore at a lower price?—It depends. Of course, it would be palatable, but it would be very much more flavourless.

1754. I mean if it had a higher burnt product it would have more the qualities of the pot still produced in it?—The patent still has no burning.

1755. I mean using the patent still to dilute, and diluting the pot still, if I may say so?—Yes. There is no doubt that pot still can be made drinkable by the use of patent.

1756. In that case, you would produce a spirit which would have the same amount of alcohol from the patent still, and the flavour from the pot still, which would have less of the pot still material to mature, and therefore could be matured in a shorter time?—That is what is going on.

1757. Therefore, you get a perfectly wholesome article for a less price by the use of the patent still?—Unfortunately, the consumer pays the same price. It is only the people who handle it on the way to the man who eventually pays for it who make the money.

1758. My point is that your pot still is really a mixture of the pure article and the burnt products. Could not you make it by producing a pure alcohol by the patent still and the burnt products by burning your pot still whiskey rather more, so as to give a blend, and then the public would have a perfectly wholesome whiskey, but would pay less for it?—I do not think the public would pay a bit less for it. I cannot get over that point because the difference in the cost of the production could not be so great as to enable the price on the bottle and the glass to be brought down.

1759. You think not?—I think not.

1760. (*Chairman.*) The middle-man will get something more?—The middle-man would get something more, but as to the consumer—I was really trying to bring it to that point—I do not think any such saving could be effected in the way you suggest, or that anybody would pay less for a glass of whiskey.

1761. (*Mr. J. Y. Buchanan.*) There is only one point more, and that is perhaps a minor point. You say that, in making pot still whiskey, as you distil over the fire, you have to be very careful as to the character of the grain and of other materials which you use?—Yes.

1762. From using the fire any deficiency in the quality of the grain might make itself felt in the quality of the spirit?—Yes.

1763. In the patent still, where all the distillation is done by live steam, and therefore the temperature is always low, is it not the fact that you may use grain of an inferior quality and still not affect the spirit coming from it? I do not mean damaged, but of a quality that you for your pot still would reject?—Yes.

1764. Take, for instance, maize?—Maize is something like 30 per cent. cheaper, and besides has high extractive quality, and, of course, it would pay us tremendously if we could use maize. But we could not use it because it would give a flavour to the whiskey in our pot still which people would not like.

1765. But using it in the patent still it might not give any special flavour?—My belief is that in the patent still they get the same product from a mash made with maize as from a mash made with barley.

1766. So far as the alcohol is concerned in whiskey it would be immaterial if it were produced in the Coffey still or in the pot still—the real alcohol?—As to alcohol, certainly the pot still, if it were not for the bye-products, would be the most expensive way of making alcohol.

1767. Therefore the customer who looks mainly to the intoxicating value of his whiskey should not complain if it is produced from a patent still?—I would not like to discuss the science of intoxication.

The witness withdrew.

Adjourned for a short time.

Mr. James Talbot Power, called.

1768. (*Dr. Horace T. Brown.*) You reside at Leopardstown Park, County Dublin?—Yes.

1769. You are a Deputy-Lieutenant?—Yes.

1770. You are also Chairman and principal proprietor of Sir John Power and Sons, Limited?—Yes.

1771. Their distillery is at John's Lane, Dublin?—Yes.

1772. You have had, I think, a large experience in distilling whiskey, and have taken a very active part in the management of the business, and especially in the distilling operations?—Yes.

1773. I believe the distillery has been in the hands of your family for a great number of years?—Yes.

1774. For 117 years, I believe?—Yes; since 1791.

1775. During that time you have only produced one kind of whiskey, namely, that from the pot still?—Yes.

1776. Of which malted barley is the chief ingredient, and unmalted barley, with smaller proportions of native oats, wheat, and rye—that is to say, cereals which are indigenous to Ireland?—Yes; that grow in our district.

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1777. You think that the term "Irish whiskey" should be confined as a trade description to spirit distilled in Ireland by the pot still process, and from the materials which I have mentioned?—Yes.

1778. For the pot still work you require that those materials should be of the best quality?—It is very essential, and that they be sound.

1779. Otherwise your product will be injuriously affected?—It would, and carry over the flavour.

1780. You have used, I think, the same materials in your distillery in the production of Irish whiskey since its commencement?—Yes. I have here my own brewing book of 1872-3—my own actual work. I was a working brewer and working distiller for several years, commencing in 1871.

1781. During the whole of that time you have never used maize in your grist?—No.

1782. Is that on account of the flavour which would be introduced into your spirits?—Yes. It would not produce Irish whiskey.

1783. Then you regard the patent spirit made in a Coffey still as being altogether different spirit from that which can be produced in a pot still?—Absolutely different; a neutral spirit.

1784. Has that spirit any of the characteristics of whiskey according to your idea?—None whatever; and it would not be accepted by any Irishman as whiskey.

1785. You maintain, I believe, that the instructions to the Excise distinctly imply that pot still spirit is alone entitled to the name of whiskey?—The inference is drawn from that.

1786. From certain paragraphs of "The instructions for surveying distilleries and warehouses"?—Yes. Practically at the time that those instructions were framed there was no other spirit sold as whiskey except the standard Scotch and Irish.

1787. What is the date of those instructions? Can you give us any further details as to those instructions and how to obtain the inference from them on pages 117, 118, 123, and 124 of the Excise book?—Yes. You will find them in the Excise book if I may hand it to you. There have been several editions of the book brought out at various times.

1788. Would you briefly state how you draw that inference? Will you take the book of instructions in your hand and inform the Commission how you obtain that inference from it?—It is largely in this paragraph.

1789. That paragraph says this: "The objects sought to be obtained by Coffey's apparatus are rapid distillation and the production by one operation of a pure spirit"?—Yes, and not whiskey.

1790. Your inference is drawn mainly from that paragraph?—Yes, and the other paragraphs that bear upon it.

1791. What is the material principally used in the production of patent spirit?—Of course, in Germany it is potatoes, but in this country it is practically now confined to maize, I believe. It is the most productive and yields the most spirit of any grain.

1792. With that maize I suppose a certain proportion of malt has to be used?—Yes, for conversion; but that malt is not cured malt like ours for obtaining flavour. It is practically green malt with high diastatic property in it for conversion solely.

1793. Then you state in your *précis* that it would be folly to make patent spirit from high-class malt and native corn which is so much more expensive than maize?—That is my opinion.

1794. Irish pot still whiskey is made, is it not, by a succession of three separate distillations?—Yes, and by direct fire heat.

1795. You claim by that particular process that a distinct character and pure flavour is acquired?—Yes, and the aromas, the natural essentials of the grain, carried over.

1796. It is also your opinion that the patent distilling apparatus in which live steam is used eliminates all flavour and produces a silent spirit?—Yes, without the characteristics of whiskey.

1797. Has there been any change whatever in pot stills used in your distillery since you have known it or since you have known the history of it?—I can speak from 38 years of practical experience, and there has been no change whatever in our stills during that time, and as far as tradition and information which I have learned in our distillery go, our stills are practically the same as formerly. There has been no change whatever in the pot still.

1798. Since the foundation of your distillery in 1791?—So I am informed. We have had the same family of distillers for four generations—the Whitty family.

1799. You maintain that whiskey cannot be produced except in the pot still?—I am satisfied of that.

1800. Your pot stills are furnished, I believe, with a line arm and a return pipe to the still?—Yes.

1801. That is a very old appliance, is it not?—It was in operation when I joined the distillery 38 years ago, and as far as I can learn we have always had them.

1802. Will you give the Commission some information as to the wholesale price of your pot still spirit as compared with silent spirit or patent still spirit?—Our whiskey, when new, we sell at 4s. a gallon.

1803. (*Chairman.*) You sell at that price?—We sell at 4s. a gallon.

1804. Wholesale?—All wholesale. New whiskey, 25 per cent. over proof. Patent still spirit I have known sell for 10½d. to 1s., but 1s. 4d. perhaps is the usual price.

1805. (*Dr. Horace T. Brown.*) You regard the practice of selling patent spirit as whiskey, when there is a small addition of pot still whiskey to it to give it a taste, as a distinct and modern fraud?—It has been a gradual growth; it has come on gradually; but every day more and more appears to be added to whiskey, and it is palmed off upon the public, and is, in my opinion, a definite fraud.

1806. (*Chairman.*) You do not jib at that word "fraud" at all?—No, my lord. I think it is a definite fraud to palm off an article which is not whiskey as whiskey.

1807. (*Dr. Horace T. Brown.*) What do you expect the man in the street to expect when he asks for whiskey?—I think he would break my head if I gave him a silent spirit instead of pot still whiskey, but in Ireland—and I know Ireland very well—I am satisfied that every Irishman believes when he asks for whiskey, although he may not say "Irish whiskey," but when he asks for whiskey meaning Irish whiskey, he means to get the product of the pot still—whiskey made from the cereals that grow in Ireland. There is practically no Scotch whiskey sold in Ireland except in the cities. Commercially, all the whiskey sold in Ireland is Irish whiskey.

1808. In your opinion, that which is genuine pot still whiskey has been made from time immemorial from the same materials and by exactly the same process of distillation?—Yes, and the pot still.

1809. And in your opinion no other product is entitled to the term "Whiskey"?—That is my belief and opinion.

1810. Your present object, I suppose, is not to restrict the trade in patent spirit, but to ask that the trade should be conducted openly and in such a manner as shall not be to the detriment of the long established pot still whiskey industry?—Yes. I hold that it has been conducted by stealth in the past. No silent spirit is ever sold in the wholesale trade except as silent spirit or grain spirit—never. It is only when it comes to the consumer that it is palmed off as whiskey.

1811. Then you think the public requires protection in this respect?—I do.

1812. If a man prefers a mixture of pot still whiskey and patent spirit you would not prevent him from getting it?—Certainly not, if he knew what he was getting.

1813. You think the Revenue regulations at the present moment fail to protect the whiskey distiller and the public?—I do. I think they should be very much helped. I have urged that very often at Somerset House. I think they could do it by regulations. I think it cruel the many things that are permitted to be done under the present Excise regulations.

1814. Then you think that they should stop this so-called fraud?—Yes, so that the public should know what they are getting. I should like to say that the Inland Revenue have always sheltered themselves by or narrowed their duty solely to the collection of revenue.

1815. You think they ought to go beyond that?—I think they ought to see "fair play."

1816. You state that it is not only possible, but that it is a common practice under the existing regulations to send from a bonded warehouse to any other warehouse casks of patent spirit, blending them in bond with a little pot still whiskey?—It is a growing and increasing trade.

1817. And that casks of this are consigned to England with an Irish Revenue permit and sold in England as Irish whiskey?—Yes.

1818. You can of course substantiate that?—Certainly, it is an every-day occurrence. I have seen the invoices.

1819. Can you tell us what goes on in bonded warehouses, which are under the Excise supervision, with regard to the labelling of spirits?—I think the greatest misrepresentation results from those warehouses labelling. The Excise pay no attention to what labels go on the bottle provided there is not the single fact, which is true, that it was bottled in bond. They object to that, but they do not exercise any supervision over any age or any description which may be upon the label, but they object to the fact "bottled in bond." Here I may say that in our foreign trade we suffer, I think, a very great hardship by not getting Excise certificates stating what we export. It is required now by the foreign Governments, by America, Australia, New Zealand, South Africa and others.

1820. (*Mr. Guillemard.*) What is required by them—an Excise permit?—A certificate.

1821. No foreign Government, I think, actually demands an Excise certificate?—A certificate is required, and my point is that it is a very serious hardship on us manufacturers of a pure pot still whiskey that we cannot get an Excise certificate, especially about the age, all of which matter the Excise have in their books. I may say in reference to this that one of the officers did issue such a certificate on a sheet of paper as an Inland Revenue officer, and he was hauled up. One of the Inland Revenue officials did give us, at my request, such a certificate about the age of the whiskey, and he was hauled up by Somerset House for so doing. It was perfectly true.

1822. I remember the occurrence?—They required it in Melbourne.

1823. They require a certificate in Melbourne?—Yes. We thought it a very great hardship, for it was simply what was on the cask. It certainly is not helping British trade abroad.

1824. (*Dr. Horace T. Brown.*) It is your belief that in the interests of the public health and in the interests of legitimate trade certain restrictions should be placed upon the materials and processes which may be used in the manufacture of Irish Whiskey?—Yes.

1825. Or any spirit to which the term "Whiskey" may be applied as a trade description?—Yes.

1826. Will you give us some statement as to what you consider those restrictions should be?—A correct trade description. I consider that Irish whiskey should be called "Irish Whiskey," and that Scotch whiskey should be called "Scotch Whiskey"—"Irish Whiskey blended with grain spirit," or "Scotch Whiskey blended with grain spirit," or "grain spirit" by itself, and that every cask or bottle, or other receptacle should carry out that trade description. I think there would be no trouble, inasmuch as the Inland Revenue officers have the right to and do follow every cask that goes to a licensed trader. They have a right to search his premises and to follow the whiskey into his premises, to examine his books and to see that what he receives is duly entered in his stock book, and I think very little more would enable them to have full control of what was going on and what labels were going on. They have the machinery and they exercise it.

1827. Will you give us some further idea of what restrictions you think ought to be imposed with regard to the materials used in Irish whiskey?—I should like to limit them to cereals indigenous to Ireland; that is to say, cereals that ripen in our country.

1828. You would exclude maize?—Definitely, it is not grown and it would not ripen as a crop in our country.

1829. Are there any other restrictions that you would impose as regards the materials?—We like to buy everything that the tillage farmer has to sell us in the shape of grain.

1830. Then with regard to your suggestions as to maturing in bond?—I concur with Mr. Jameson that it would be very desirable to give to the public a matured article, and I quite concur in his limitation of three years.

1831. Would you apply that to all spirits?—I would. I think it would be "fair play."

1832. To the patent still as well as to the pot still?—Yes, in fair play, although I do not myself believe there is much, if anything at all, in the patent spirit to mature. Of course it will mellow and soften with the effect of the cask.

1833. Would you recommend that restrictions should be placed upon patent still spirit with regard to bonding, of a similar nature to those of pot still, although one spirit would mature rapidly while the other would not?—I am for unity of administration, and I think certainly it would not be fair to give any advantage to the patent spirit over whiskey.

1834. If you have two articles of the same nature one of which will mature more rapidly than the other, is it fair to impose upon one a limitation as to bonding which is based upon the requirements of the other?—It would soften, it would improve, it would mellow, and it would make it in my opinion less objectionable.

1835. But your main idea is, I think, that they should both start fair?—Yes, I think they should.

1836. Apart altogether from any changes which take place in their quality during the storing?—We all ripen and mellow and mature by age.

1837. You are I believe a practical distiller?—I am a working distiller. I was asked whether I was a practical distiller at one of the previous inquiries but it was following a question about amyl alcohol, and I thought when I was asked that it was meant with regard to chemistry, and I said that I was not a practical distiller and that I could only pose as a working distiller, which I have been for several years, and a brewer.

1838. The Commission is very desirous of getting some positive information about the relative cost of the production of patent still spirit and pot still spirit. I have no doubt that you will be able to give us some information on those points. In the first place I would like to ask whether you quite agree with what Mr. Bramall said the other day that Irish whiskey is distilled from at least 50 per cent. of barley malt?—That is our practice. I think he was giving you our figures.

1839. Are there not many Irish pot distillers who use much less than that?—There are.

1840. Can you give us an idea as to what is the average amount of malt used by the Irish distillers?—I should think about 45 per cent. to 50 per cent.

1841. Would you be inclined to take certain statements in this book of Nettleton's on the manufacture of spirit with regard to the composition of the grist of Irish distillers?—I have read them. Of course that is all some time ago.

1842. This book I have was published in 1893?—The quantities I think refer to the past. There is a considerable variation there, you will observe, because different distillers sell at different prices, and they have to cut their coat according to their cloth.

1843. He gives six examples of mash and materials used in Irish pot still distilleries, and I should like to ask you a few questions about this. First of all, I will read them out. The first one is all malt, No. 2 is 30 per cent. of malt, 40 per cent. of barley, and 30 per cent. of oats, No. 3 is 33 per cent. of malt, 47 per cent. of barley, and 20 per cent. of oats, No. 4 is 80 per cent. of malt and 20 per cent. of mixed

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grain, No. 5 is 25 per cent. of malt, 65 per cent. of barley, and 10 per cent. of oats, No. 6 is 20 per cent. of malt?—That is very low.

1844. And 65 per cent. of barley, 10 per cent. of oats, with 5 per cent. of rye?—I think that is a bad distillery.

1845. The average amount of malt in all these six is 48 per cent.—very nearly the amount you say you use yourself?—Yes.

1846. Will you tell me whether you consider those at all representative of ordinary Irish practice?—I think so, but you must admit there is a very considerable difference in malts and the relative values of malts for converting purposes.

1847. But you think those are fairly representative of Irish practice?—Yes, I think so.

1848. We have been told that no Irish distiller used less than 50 per cent. of malt?—That is untrue. There are country distillers who make a very sound, good whiskey, but who do not get Dublin prices for it.

1849. One of the objections which have been raised, and I think it was raised by yourself, to the patent still product is, that, owing in part to the cheaper material used, it could be put on the market at a much less price than pot still whiskey. I am not speaking of working cost, but merely the cost of materials?—I have known it sold at 10½d.

1850. May we take it that when materials are at an average price, which they are not, I believe, this year——?—Barley has been excessively dear this year, I am happy to say, and the farmers have got a good price for it.

1851. In average years may we take it that patent still spirit at proof is about 1s. 3d. per gallon, and the price for pot still spirit is 3s. 6d. per gallon?—Yes, roughly.

1852. It would be of very great interest to us to know how much of this difference of 2s. 3d. per gallon is due to the prime cost of the materials used in an Irish pot still and patent still respectively?—I think the plain and commercial answer to that is that you cannot buy them cheaper, so that they must buy very close on the cost.

1853. You have a difference here of 2s. 3d. per gallon, and we would like to know approximately how much of that 2s. 3d. is due to the difference in cost of materials employed in the two machines?—And the processes?

1854. No, I am taking only materials?—No, no. You see, the process of pot still distilling in Ireland—three distinct boilings—is very costly. There is the coal.

1855. I am speaking merely of the cost of materials of a mash made for the patent still, say with 25 per cent. of malt and 75 per cent. of maize, against the cost of materials used in Irish pot still whiskey, where we will say there is 33 per cent. of malt, 47 per cent. of barley, and 20 per cent. of oats used?—I am sure we can call witnesses to give you that information; but as I personally have no knowledge whatever of the cost of the maize mash I could not answer the question.

1856. Do you not think we could come to something like an understanding on that?—I am afraid I cannot help you.

1857. If we know the composition of the grist—I am speaking to you as a practical distiller—and the prime cost of each of the constituents per cwt., and the average yield of proof spirit for a cwt. of each of these materials, we can surely arrive at some conclusion as to this particular point?—No. You see the pot still process is a very wasteful one, and in each of our three boilings there is very great waste.

1858. Can we come to some idea from the price of malt, barley, oats and maize? Take barley at 30s. per quarter. I think you reckon by the Irish barrel. That would be 15s. a barrel?—Yes.

1859. Is that a tolerably fair price to take?—It would be low for this year; 16s. 3d. was the Dublin price this year.

1860. In an ordinary year 30s. would be rather high, would it not?—The full price in an ordinary year.

1861. 28s. would be high?—No, not in Dublin.

1862. 30s.?—Yes, 30s.

1863. That is for four cwts., so that the price per cwt. would work out at 7s. 6d. exactly?—Yes.

1864. Can we come to some idea as to the price of malt? There I am going to take 336 lbs. to the quarter?—Eight bushels.

1865. That is 168 lbs., I think, to the barrel. Taking the price of barley at 30s., and the increase there would be in the malt as between the four cwts. and three, may we take 31s. a quarter as about a fair price for the malt?—Our malt in Dublin this year stands at 20s. 3d. for 12 stone.

1866. How much is that?—Say £1 a barrel—£1 a sack of 12 stone.

1867. That is 40s. a quarter?—Yes, this year.

1868. That is a very high price?—Yes; it is a very high price, but it is magnificent malt.

1869. That would be more than the average price paid by other distillers?—It is the Dublin price; it is Messrs. Guinness's price for their best malt this year.

1870. If you take barley at 30s. your malt is not going to cost you very much more than 31s. or 32s.?—I am afraid that is not the quality of malt we are using in Dublin.

1871. It is the quality of barley you are buying at 30s.?—Yes.

1872. The malt does not really matter very much because we are going ——?—There are great expenses in Dublin because nearly all the malt is made in the country and it has to be brought up to Dublin at a cost of nearly 1s. 6d. a barrel.

1873. There are times when you can buy malt at 31s. or 32s. a quarter, or 16s. a barrel?—We buy by the stone—by the Irish barrel. It is such a pity we have so many measures in our trade.

1874. Is 19s. a quarter for oats a fair price at 336 lbs. to the quarter? That was the current price of the market on Monday. May we take maize at 25s. 9d.?—I do not know anything about maize.

1875. That is the current price. Can you give us some idea of the yield of proof spirit from each of these materials per cwt.?—I cannot. That is the trouble we are in where we mix all our grain together. We have no experimental plant, and we cannot tell you what each thing produces. We are trying to get certain flavours, a certain quality, and we do not really know what each variety of grain by itself produces.

1876. Would you be prepared to take some views on that point from authorities on the subject?—I always bow to authorities.

1877. I do not know that they are all authorities?—Doctors differ.

1878. Mr. Tedder, who came to give evidence before the Commission, gave certain figures with regard to yield of spirit from malt which I find work out at almost exactly 5½ gallons per cwt.?—I think he said 16½ gallons per quarter.

1879. Yes, but taking malt at 336 lbs.?—I would adopt his figure.

1880. That was 5½ gallons per cwt. We have a higher figure from Mr. Molyneux, who made it about six, whereas Nettleton makes it about 5¾. Let us take the average of those three at 5·6?—We thought Mr. Tedder was practically right, speaking for the country.

1881. The average of those is 5·6 as against 5·5. Do you know what the yield of spirit is from barley?—I have never tested it solely.

1882. Will you take Nettleton's figure for that? He gives a series of averages, and the average is 5½ gallons per cwt., that is 112 lbs. of kiln-dried barley. For oats he gives 6¼ proof gallons per cwt., and for maize an average of 5½ proof gallons per cwt.?—I am surprised to hear that, because that is contrary to my information.

1883. You mean that the maize gives a higher average?—Yes. There are so many countries producing grain and the quality of maize from each country is so absolutely different.

1884. You would rather contest that figure of 5½ gallons?—I am sure the American maize will produce more than that.

1885. More than 5½ gallons per cwt?—So I am definitely informed.

1886. I should like to show you how those work out on two representative mashes. I am taking your Irish pot still mash, which you recognise as a fairly representative one, of 33 per cent. malt, 47 per cent. barley, and 20 per cent. of oats. That is a fairly representative mash I imagine?—Yes, it is low in malt. That would be very low.

1887. 47 per cent. of barley and 20 per cent. of oats?—According to our method of working, it is very low in malt and high in barley, and much the same in oats.

1888. Would 50 per cent. of malt, 40 per cent. of barley, and 10 per cent. of oats come nearer to your mark?—Yes, it would come nearer.

1889. I will give you the price per proof gallon as regards the materials only from that mash of 33 per cent. malt. I make out that the materials, taking those yields into consideration, per proof gallon would be 1s. 5½d.—that is, the materials represented by the cost of a proof gallon would be 1s. 5½d., and on a patent still mash consisting of 30 per cent. of malt and 70 per cent. of maize, the cost of materials per proof gallon would be 1s. 3¾d., showing a difference of 1¾d. per proof gallon. As between the representative mash which you would use in your own pot still and a patent still mash consisting of 30 per cent. of malt and 70 per cent. of maize, the difference, as far as I can make out, is only 1½d.?—That may be so on those figures.

1890. So that the difference in the cost of materials is not so very great as between the ordinary patent still mash and the mash on fairly representative Irish lines of a pot distillery?—I am quite surprised to hear that, and I cannot accept it.

1891. I shall be very glad to give you the details of that to check. I hoped you would be able to give me some positive information on these points. I think they are correct.

1892. (*Dr. Adency.*) Mr. Jameson told us that you claim as the chief characteristic of pot still whiskey that of flavour?—Flavour and aroma and sweetness—body.

1893. These flavours vary with different distilleries?—Yes, certainly, the waters affect them very materially.

1894. Even using the same water?—Yes, the method of distillation.

1895. The flavour of your whiskey is somewhat different from that of Mr. Jameson's?—Yes, absolutely different from John Jameson's.

1896. You try to reproduce your characteristic flavour yourself?—We try to adhere to our tradition.

1897. Can you tell me whether a chemical analysis shows that the spirits which you say, on tasting, are similar, are similar in chemical composition? Do you understand what I mean?—I do not catch the point.

1898. Does the judgment of the taster and the judgment that can be formed from a chemical analysis run side by side—do they run parallel?—Chemistry is very helpful, but I am afraid we have much more confidence at present in the taste—in the palate. We judge entirely as to the quality of our whiskey, when to turn it on or off, by tasting. We are producers of flavour, not of spirit.

1899. Would it surprise you, if I told you, as a chemist, that at least in the case of some spirits, brandies, for instance, the judgment which can be formed from chemical analyses of samples of a similar brand of brandy and that of the taster run very parallel together? Would it surprise you to hear that a similar state of things exists with regard to the composition of whiskey?—I can only assume that the analysis of brandy has been carried to a greater perfection than our present knowledge of the analysis of whiskey.

1900. So that you could not, in supporting a claim that a whiskey was or was not a genuine pot still spirit, base such upon any possible condition of uniformity of composition?—I do not think so; but it is always a help, of course.

1901-2. I notice that Mr. Jameson relied very much upon the flavour as being the great characteristic of Irish pot still whiskey. Is that the only characteristic that you could claim for it?—The flavour, aroma, sweetness, body and effect of it, the pleasure of it, the effect upon the drinker—the pleasure it gives.

1903. Do you not think it is a strong point in favour of the well-matured pot still whiskey that it is a spirit that the public has tested for generations and knows its effect by experience?—And that has not changed in character.

1904. Then in supporting well-matured Irish pot still whiskey you are really supporting spirit which has always been recognised as a genuine spirit, which has been tested by generations of the public by experience?—Yes, and accepted by them, and known by them.

1905. So that whatever may be subsequently found to be the effect physiologically of new spirits, you say you know something of the effect of older pot still spirits?—Yes.

1906. Your whiskey is put on the market both in bottle and in bulk?—Our chief trade is in bulk. We really commenced bottling for the foreign market where they would not take whiskey in bulk.

1907. Would you mind telling us the age that you regard as satisfactory for maturation?—Of course, we like to see our whiskey used, and it is very largely used, at seven years of age. That is what we like and desire most, but a considerable quantity of our whiskey is sold at five years.

1908. And not less than five?—Some is, but five years is very general for the better class public-houses. In Dublin I think they are all five years old.

1909. That you regard as a sound whiskey?—Yes, five years old; very good.

1910. And that is sold at a fair profit at the rate at which the patent still spirit is sold?—Yes, 4d. a glass. It is very good; fairly matured.

1911. You have heard, probably, the questions that I put to Mr. Jameson on the subject of the fractionation powers of the pot still?—Those we do not admit at all. Of course, a pot still by boiling three times purifies and improves whiskey, but that it fractionates we do not admit at all. It separates the good from the bad; that may be called fractionation, but we call it, like a cook, boiling and skimming off.

1912. What it is important for the Commission to know is what really are the principles underlying these two types of still?—Ours is the genuine and the other is the imitation.

1913. I would suggest to you that it might be quite possible to obtain the amount of fractionation which experience has shown to be necessary to produce a sound whiskey by a patent still specially constructed as by a pot still?—I am afraid I do not catch the point.

1914. The pot still is really very similar in principle to the patent still, but its construction has been especially adapted to produce just the exact amount of fractionation which experience has shown to be necessary for the production of a sound whiskey?—Pardon me; I cannot accept any similarity between the two stills. The patent still is a box of tricks.

1915. I do not mean from outward appearance?—Live steam is blown into the patent still and the alcohol driven off. Our process is to carry over the natural essentials of the grain whatever they be—to carry them over carefully and preserve them; the very best.

1916. Of course, you see the object of my remarks is not to discredit the pot still, but simply to make certain that a similar product could not be obtained from a patent still?—If it was, there would not be a single pot still distillery left in the land.

1917. (*Chairman.*) If what was?—If they were the same in any way the pot still distilleries would all be swept away. It is the fact that they cannot get on without the pot still whiskey, and that accounts for our existence to-day. That I hold to be the fraud.

1918. (*Dr. Cushny.*) Have you always used three stills in your distillery?—In all my time—38 years—and certainly as far as hearsay goes we have always had them on the premises. That is the common practice, I think, of the whole of the pot still distilleries in Ireland. They are everywhere.

1919. Not the illicit still. The original illicit still only used one?—But they used it three times.

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1920. Three times?—At least twice; the same still; they used it over again. I have seen them at it, with all apologies.

1921. When was the line arm used?—The line arms have been in our distillery all my time—that is 38 years—and they were there then. I am sure they have been in existence in Ireland as long as our stills have been of their present capacity. Our stills, especially in Dublin, are enormous vessels. Just imagine boiling 20,000 gallons of anything in a pot still. They are immense vessels, and with such big fires as we have under them there is an enormous mechanical uplift, and our line arms are simply to check whatever should not go up and cast it back. They are a very slight check; they are simply to check it and get your spirits to run steadier.

1922. Do you suppose that those line arms are 100 years old?—I have seen them in certain Highland distilleries battered and old looking, and how long they have been there I do not know.

1923. In your three or four different classifications of whiskey do you suppose anyone could determine with any degree of certainty between Irish whiskey blended with grain spirit, and Scotch whiskey blended with grain spirit? You could not do that by analysis?—If you tempt a chemist he will take your fee and say he can do it.

1924. Do you think he could?—That is hardly for me to say.

1925. (*Chairman.*) I understood you to say that the patent still producers do not apply the term "whiskey" to their product. Is that so?—In the wholesale trade to-day they do not.

1926. Are you speaking now of Ireland only or of Ireland and Scotland?—I am speaking of anywhere. I have seen the invoices in all the large London offices of England, and they always invoice it as "grain."

1927. Does your observation apply to the Scotch patent still distilleries as well as Irish?—I am certain that Scotch patent still distilleries invoice it as "grain." They are in the catalogues as "grain."

1928. And not "whiskey"?—I am certain they are not.

1929. They do not call it "grain whiskey"?—Not in the wholesale trade.

1930. Do they use the term "spirit"?—It is generally "pat." It is invoiced as "pat." There is no fraud in the wholesale trade—no misrepresentation.

1931. We will not use that term. I have in my hand a trade list of Trower and Sons, and there the word "whiskey" is used, and that is a patent still whiskey?—Is that a blend?

1932. I am now on Scotch entirely. You may be right as regards Ireland?—Is it Trower and Sons, of St. Mary-at-Hill?

1933. Yes?—They are, of course, distributors. That is a list going to the public.

1934. Does your evidence only apply to the distiller and do you mean that afterwards it does become "whiskey" in the trade?—That is where the fraud has been gradually creeping in if it be a fraud; that has been gradually selling as whiskey. Trower and Sons are very great friends of ours. They are some of the largest distributors in London.

1935. Your view is that as regards a distiller in Scotland, he does not apply the term "whiskey" to the patent still product?—Certainly, my Lord. There is no misrepresentation in the wholesale trade. All the wholesale men know exactly what they are buying. The price indicates it.

1936. How do you think the change takes place from "grain spirit" to the term "whiskey"? In whose hands does that occur?—When you come down to the retail trade.

1937. I want it a little more definitely. Is it when the spirit, that which is now called at this stage spirit, is in cask, or is it afterwards, when it is bottled?—No, the moment the blender gets hold of it. The blender is like a middleman between the spirit producer and the retailer. It is his business, and he has risen upon this misrepresentation.

1938. Do you continue that word "fraud," and apply it to that transaction? Suppose he blends a large quantity of pot still whiskey in the blend, should you then term it a fraud?—I call anything a fraud that is misrepresentation.

1939. That is a general observation which does not meet what I am putting to you. If your mixture is of a large proportion of pot still whiskey, is it a fraud to call that blend "whiskey"?—That is our contention.

1940. Where do you stop? Can you apply the term "whiskey" if the blend is 90 per cent. of pot still and 10 per cent. of patent?—Our contention is, anything which is not pot still is not whiskey.

1941. However great the blend may be of pot still?—That is our contention, but of course we are not unreasonable.

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

FIFTH DAY,

Tuesday, 17th March, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. ALFRED GILBEY, called.

Mr. A. Gilbey.

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1942. (*Chairman.*) You are a director of the firm, now a company, of Messrs. W. & A. Gilbey?—Yes

1943. How many years has your firm been in existence in its original capacity?—The firm originally commenced in 1857. I have been in the business since the year 1877. I have been a partner since 1880. It was then turned into a limited liability company, and I have been a director since then.

1944. What is that business?—Wine and spirit merchants.

1945. Wholesale, I suppose?—Wholesale, I think you may say.

1946. Do you sell large and small quantities of wines and spirits?—Yes. Principally our business is done through our agents all over the country.

1947. That is in wines and spirits?—Yes.

1948. Including, of course, whiskey?—Yes.

1949. You have said that your firm has agents all over the United Kingdom?—Yes, my lord.

1950. That is called the distributing business, is it not?—Yes.

1951. You are one of the managing directors and take a practical part in the business?—Yes.

1952. Will you give your attention now principally to whiskey? First of all, in what way do you distribute your whiskey? Is it in cask or bottle?—In bottle almost entirely.

1953. And, of course, the quantities vary?—Yes.

1954. What is the usual quantity?—The ordinary quart bottle. We sell it to our distributing agencies in quite small quantities.

1955. And in large quantities, too, I suppose?—Yes.

1956. Do you deal in that way both in Irish and Scotch whiskies?—Yes.

1957. As we were dealing with Irish whiskey yesterday, I will ask you first for your definition of Irish whiskey?—With regard to Irish whiskey our definition is that it is a spirit distilled in a pot still principally from malt, with certain amounts of unmalted grain, such as wheat, rye, oats, etc., to give it a flavour, and which gives it that characteristic which is known as Irish whiskey.

1958. Do you limit those other quantities of grain which may be mixed with that malt?—Yes, I think so. Irish distillers would not think of using maize, for instance.

1959. Is it grain that is indigenous to Ireland?—I think the Irish distillers confine themselves almost entirely to grain grown in Ireland.

1960. You have mentioned maize. Would you entirely excommunicate maize, and say that maize must not come into whiskey at all?—No.

1961. If maize in any substantial quantity were used, should you say that product ceased to be whiskey?—Yes, I should say so, and it would certainly give a distillate of pot still such an extremely pronounced flavour that it would not really be whiskey distilled in a pot still.

1962. But is the use of maize, whether used in a pot still or patent still, equally objected to by you?—Not in a patent still. I do not think that matters—I do not think it signifies.

1963. In the first place, have you ever been in the habit of selling any patent still whiskey, either Scotch or Irish?—We sell three brands of whiskey, which contain a certain quantity of grain spirit or grain whiskey in it, and we describe it on the labels. I have here bottles containing that with the labels on them as we describe it in our business.

1964. What is that whiskey as a fact, according to you, that you are now speaking of? Is it a patent still whiskey?—We call it simply "Provost" whiskey, or "Rothmore" whiskey; we do not call it Scotch whiskey; and then on the label we say that it is a blend of Highland malt whiskey and grain whiskey.

1965. Will you produce a sample of that?—Yes (*same produced*).

1966. This is a bottle labelled "Provost whiskey." What is "Provost"?—It is a name given to a blend of pot still whiskey, the produce of our own distillery, and patent still spirit. Then I have here several other samples (*same produced*). This one is a blended whiskey.

1967. In the first place, what is the blend?—It is a blend of pot still malt whiskey and grain.

1968. What are the materials?—We know the principal ingredient in patent still spirit is Indian corn—maize.

1969. What is the proportion of the two characteristics of spirit that are blended? How much is there of pot still whiskey?—It is about 60 per cent. of pot still, and 40 per cent. of grain, although we do not state it here.

1970. That is as it is made up by you and sold; but, of course, a purchaser would not know to what extent it was made up of pot still and grain?—No.

1971. Then the next sample you have produced is "Rothmore" whiskey. Is that a fancy name?—Yes.

1972. Again, you do not trace the extent of the grain in that?—No.

(The Witness produced and described various samples to the Commissioners.)

1973. Of these samples that you have given us, two were blends?—Yes, my lord.

1974. On one of them your label says: "Of the blend Rothmore whiskey." Is that right?—Yes.

1975. Why?—We did not feel, in the face of the judgment that had been delivered before, that we could call it Scotch whiskey, and therefore we call it "Rothmore" whiskey.

1976. What judgment are you referring to? The judgment in the Islington case?—Yes.

1977. Another one you call "whiskey"?—Yes.

1978. Why did not you call it "Glenlivet" whiskey?—That would be wrong, because it does not all come from Glenlivet.

1979. But if it did?—Yes, but then that would be only a proportion. We should not call anything Glenlivet if the entire quantity did not come from Glenlivet.

1980. But if you had brought it from Glenlivet?—You would call it Glenlivet.

1981. There is no such place as Rothmore?—No.

1982. If a person went into a retail shop and said, "I want a glass of whiskey," would it be correct to give him a glass of Rothmore whiskey?—As a matter of fact all our business is done in sealed vessels through agents. I think the customer would ask for "Rothmore" or "Provost" whiskey if he went into a shop.

1983. Putting it hypothetically, supposing a man who knows not very much about whiskey goes into a public-house and says, "I want a glass of whiskey," and the licensed victualler had been dealing with you, would he, according to your view, be justified in giving the customer a glass of Rothmore whiskey?—I think if he only asked for whiskey, certainly.

1984. Because it is whiskey?—It is whiskey. I do not say it is Scotch whiskey, and it would have been a different thing if he had asked for "Scotch whiskey."

1985. As it is made in Scotland?—Yes.

1986. Is it your case, then, that "Scotch whiskey" must be a pure unblended pot whiskey distillate?—We have always acted on the principle that all Scotch whiskey we sell as "Scotch whiskey" is distilled in a pot still from malt.

1987. That is rather an arbitrary nomenclature or baptismal name. If it is made in Scotland with all Scotch ingredients because it is blended it does not cease to make it whiskey. If you give it the name of "Scotch whiskey" it is rather an arbitrary christening?—That is the line we have always taken. We have never considered in the business—long before I joined it—that grain spirit was Scotch whiskey, and therefore we did not feel justified in using the name when putting it on the label.

1988. You found the tradition and therefore you carried it on?—Yes.

1989. I do not know whether you know enough of the composition of these whiskies, but as regards patent whiskey, as you say, it may be made with a very large proportion of Indian maize?—Yes.

1990. Should you have any hesitation in saying, if you were asked, that you positively declined to call patent still spirit Scotch whiskey?—Not the slightest.

1991. It is not deleterious in any way?—No; it is not deleterious in any way; it is only that it is cheaper.

1992. Where is the difference that is so marked? We have heard of flavour and strength. According to you are those the differences that exist?—Yes. Of course, pot still whiskey has a very full flavour, and it gets the flavour from the materials from which it is distilled, whereas the grain spirit is a neutral spirit.

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1993. Is there bouquet as well as flavour?—Yes; there is a strong bouquet.

1994. That is absent in the patent still?—Yes, that is quite deficient in the patent still.

1995. Now as to the alcoholic strength. Which do you say is the better for the customer to drink?—I think from this point of view that if a man is drinking pot still whiskey it will take much more dilution with water than grain spirit will. If it is pure pot still, for instance, a small quantity will flavour a whole glass, whilst if you are drinking patent still you would drink it much stronger, and you would take more alcohol necessarily when you drink patent still spirit.

1996. As I understand, the person drinking does not receive the same amount of stimulant, as it were, from the one as the other. There is more real strength in the pot still?—There is more flavour—not more strength.

1997. You take the view that it is not strength but only flavour?—There is no doubt about it that they are both retailed over the counter at the same strength. It is simply a question of flavour, and the pot still having more flavour will take more dilution with water.

1998. Could you give me any general rule as to how far you do in practice communicate information as to the article sold to your different customers?—Yes. I have here some price lists. These are price lists of ours which we distribute. (*Handed to the Commissioners.*)

1999. I see in this list with regard to Rothmore you give a guarantee. What is it that you guarantee?—We guarantee that the article is what we say it is.

2000. Then taking Rothmore whiskey, the guarantee that it is Rothmore whiskey is not much?—But it is guaranteed to be a special blend.

2001. You guarantee that it is that blend?—Yes, we guarantee it is that blend.

2002. These papers that you have handed us you send to your agents?—Yes; we send those to our agents. These are our circular price lists. (*Handed to the Commissioners.*)

2003. I will take your price lists first, which vary, of course, a good deal. You have the prices per bottle and I will take those first. You start with 1s. 9d. and run as high as 5s. The first one you head "Pure malt pot still," and then they vary according to the proof strength?—Yes.

2004. Then you have "Choice old Highland whiskey"?—Yes; that is all distilled in the Highlands. The whiskey distilled in the Highlands is pot still, and is better than that of the Lowlands.

2005. What is it that makes it better?—It is principally the water, I think. I do not know how it is, but there is no doubt that the whiskey distilled in the Highlands is better than that distilled in the Lowlands.

2006. The price of the blended whiskies seems to be about the same price. Rothmore blend is the highest?—That is because it is a blend of very old whiskies.

2007. Taking all things to be equal, proof strength, age and everything else, what would be the difference between a blend, say, of 60 per cent. of pot still with 40 per cent. of patent, compared with pure pot still?—Of course, the value of patent still is about half that of the pot still. I have the prices. There was recently some sold by auction which will give you a very good idea.

2008. When you say it can be obtained at half the price, that does not occur if the ingredients are the same?—I do not think they would ever use malt in a patent still because it is not necessary.

2009. Is not your evidence this, that taking the manufacture of patent still, as largely manufactured, you would get the comparison of prices you mentioned?—Yes. Of course, the patent still is a continuous process, and it is much cheaper.

2010. It does include the alteration in the material? You do not get as much maize in pot still as you do in patent still?—No.

2011. Surely that is one of the reasons of the lowering of the comparative prices?—Yes. Of course, the continuous process makes it cheaper.

2012. Is there any alteration that you could suggest with regard to the safety of the public that could be made in giving more information to the public of what it is that the public consumes than is given at the present time?—I do not feel myself qualified to say what should be done. I have only come here to tell you what we do.

2013. Having got you here we want to make the most of you. You have more practical experience than we have?—I think that a declaration should be required to be made as to the materials, the processes of manufacture, or preparation, and I cannot foresee any difficulty in making such declarations as to the materials used in whiskey, and as to whether it is pot or patent still.

2014. Would you say that in Ireland an ordinary consumer would know a great deal about the character of the different whiskey, and would know whether to ask for Jameson, Power, or Dunville? Does that occur in ordinary trade in Ireland?—It certainly is the case in Dublin, and certainly is the case in Ireland; but in Scotland it is rather different. In very few cases is Scotch whiskey sold from the distillery to the trade as it is in Ireland. In Scotland, for instance, there is a body of gentlemen called blenders. They buy the whiskey and blend it, and they afterwards sell to the trade here under various blends. In very few cases does Scotch whiskey reach the public as the produce of any particular distillery.

2015. Does that apply to districts: take Glenlivet or Speyside?—Yes.

2016. In Scotland do they ask for any particular district's name of whiskey?—Each particular district usually drinks the whiskey of the district.

2017. It is very delicate ground for you, but how would you deal with it if you were required to describe the article sold? How would you deal from your point of view with the question of blending? Could you go to the extent of saying what was the amount of blend of the two classes?—No. I think where any grain spirit is used it is enough to state the fact on the label, but as to the proportions I think it would be very difficult to prove.

2018. It is not a question of proof but of declaration. The difference between a blend of 90 per cent. and 10 per cent., and a blend of 50 per cent. and 50 per cent. is enormous?—Yes.

2019. Would it be possible to disclose in the course of sale to what extent the different ingredients had gone into the blend?—My firm would have no objection to do it. I do not know what other people would feel.

2020. (*Mr. Guillemard.*) If that was done, how do you think it could actually be checked to see that the article corresponded to the declaration?—That is the difficulty. That could only be done by chemical analysis, and whether a chemist could check that is a matter that I could not give any opinion upon.

2021. You have not any opinion as to whether it would be practicable?—I can offer no opinion as to whether it is practicable.

2022. Would the same thing apply with regard to declarations as to materials, processes of manufacture, or proportions?—I think that could be checked by the Inland Revenue.

2023. I am rather doubtful about that. You could check it to a point, but there must be evil in every trade—people who are unscrupulous. What declaration could cope with them?—I do not think there would be difficulty, because as a matter of fact in Scotland no one would use anything but barley malt in a pot still. There are only about a dozen grain distilleries, whereas there are 140 pot still distilleries.

2024. How definite would you make your declaration as to materials? Would you make any distinction between the different forms of malted grain?—No; I do not see any necessity for doing that.

2025. In contrast to that, a great many other people have told us that you cannot make with maize, as with malted grain, a product that could be sold as whiskey. We have had a good many people come and say they take the line that under no conditions should the product of maize be sold as whiskey. You do not agree with that?—I do not think one can go quite so far as that. I think between Scotch and Irish whiskey there ought to be drawn a distinction.

2026. Then with regard to the use of maize in a pot still, I think you threw doubt on the idea that maize was ever used in a pot still?—I never heard of it being used in Scotland, and it would give, I suppose, some flavour which was not Scotch.

2027. I do not limit it to Scotland?—I do not know what they use abroad, but I have never heard of maize being used in a pot still.

2028. Not in Ireland?—No, nor in Scotland.

2029. I do not know whether it has been given in evidence that maize was used in a pot still in Scotland?
(*Dr. Horace T. Brown.*) Yes, it has been given in evidence.—We have three distilleries, and we have never used anything but malt. We should be very sorry to use maize. It is the first I have ever heard of maize being used in a pot still.

2030. (*Mr. Guillemard.*) If you are interested you will find it mentioned in the first day's evidence. Then with regard to the blends. You would like what you call the average age put on the label?—Yes.

2031. What would you call the average age of a blend? Start with two things mixed, one of ten years and one of five years, and the proportions half and half?—That would be rather difficult, I must admit.

2032. Would not that be always universally the case?—If some of the whiskey was ten years old, say, half of it ten, and half five, it should be called seven years.

2033. But would you get two whiskies half and half?—I think you could get it very near.

2034. There are a great many blends that have quite a number of whiskies put in them, and it is a trade secret what the proportions are. Would not you get into difficulty very soon?—It might be attended with some difficulty.

2035. Do you think you could really put on the bottle a declaration of what the average age of a blend was that would correspond with facts and could be tested?—We could do it, I am sure.

2036. Yes, because you only blend a few things in certain proportions, but I am trying to learn from you as to the trade taken as a whole?—You might get that from other witnesses. I do not think Gilbey's would have any difficulty about it, although we do blend a variety of malt whiskies.

2037. Now, I want to ask you a question as to maturing in bond. Are you in favour of keeping all whiskies, including blended whiskies, in bond for a period?—Yes.

2038. How long would you say?—Certainly three years.

2039. What would be the object of that from your point of view?—There is no doubt that whiskey does improve by age.

2040. Using the term "whiskey" as meaning all whiskey?—I mean that malt whiskey certainly does improve by age, and malt whiskey to a very much larger extent than grain.

2041. You would hold that both spirits, the pot still whiskey and the patent still whiskey, both improve by keeping?—Yes, but I think the patent still whiskey only improves to a very small extent.

2042. If I am right, I think that is the conclusion that was arrived at by the Select Committee of 1890-91 that they both improve by keeping, but that the patent still spirit improved to a very slight extent, and the pot still spirit to a greater extent?—I think the grain spirit softens to a certain extent. Of course, there is not anything in that spirit to improve like there is in malt whiskey.

2043. I see in your evidence you say that the result of the patent still distillation is to produce a neutral spirit. Do you want to press that as a definite opinion that it is neutral or silent, or do you only mean that it has less of the bye-products than the pot still?—I think it is almost neutral.

2044. Almost pure alcohol?—Yes; I could send you samples if you would like.

2045. Speaking of patent still spirit generally, do you think it a fair description to call it a neutral spirit?—Certainly.

2046. There is a good deal of patent still spirit drunk, is there not, with no admixture of pot still at all?—I have never heard of it being drunk in this country without a little flavouring. The only gentleman that I heard say he drank it was Sir James Dewar.

2047. What about Cambus? Is not that all patent spirit?—I believe it is, but Sir James Dewar was the only person I ever heard of who said that he drank it. I heard him say that in Court.

2048. And there was Mr. Walter, K.C.?—Yes, and Mr. Walter. We have never been asked for any in our business. We have distributing agencies all over the country. Of course, it is a very good grain spirit.

2049. You would think that the people drinking spirit like that are drinking pure alcohol and nothing else?—It is very nearly that. I have here a sample of grain spirit which is eight years old, and I should be very glad to show it to you or anyone. You need not taste it, but you can smell it. There is not a strong smell with it, as it contains very little flavour.

2050. (*Dr. Bradford.*) I think you hold the view that pot still is less harmful than patent still. I think you gave that in evidence?—Did I say that? I do not think I did. We will leave that to the medical profession. I do not want to say anything about that.

2051. (*Dr. Adeney.*) You gave us a definition of Irish whiskey, but did not give us a definition of Scotch whiskey?—Scotch whiskey is a spirit distilled from malt in a pot still.

2052. Could you tell me the age of the Castle H.P. whiskey that you have in the list that you gave us?—It would be about four years old, but certainly not under.

2053. Is that the minimum at which you sell pot still whiskies?—As far as I remember it is from 3½ to 4½ years old. We should not sell any pot still under that.

2054. You have no practical knowledge of your own as to the use of maize?—No.

2055. (*Dr. Horace T. Brown.*) I think, Mr. Gilbey, from what you have told us, that you would deny to a patent still product the name of Scotch whiskey whether alone or blended with pot still whiskey?—Yes; that is the principle we have always gone on in our business.

2056. I suppose an immense amount of patent still spirit is blended and sold as Scotch whiskey?—Yes.

2057. You do not think that such a blend can be legitimately called Scotch whiskey?—We have never thought so.

2058. Not even if the presence of grain spirit in it has been declared?—No; that is the principle we have always acted on.

2059. Are you quite sure of that? Is not your memory a little bit at fault?—I was going to say it might have been since the decision in the case we have spoken of. Do you mean have we altered the label in any way?

2060. I want to ask you a few questions about that. You sell a blend which goes under the name of "Provost"?—Yes.

2061. You had a "Castle Provost" before that, had you not?—Yes.

2062. That was a malt whiskey?—Yes, and which we took out of our list.

2063. Then you substituted for that "Provost Blended Whiskey"?—Yes.

2064. Describing it as "The finest Highland malt blended with Scotch grain"?—Yes.

2065. Did you not in that list head it "Scotch Whiskey"?—The list that you have there was merely a memorandum to the agents.

2066. I have a list here dated 14th September, 1905, in which you state that you withdraw the "Castle Provost Scotch Whiskey" and introduce "Provost Blended Whiskey, the finest Highland malt blended with Scotch grain," and that is headed "Scotch Whiskey"?—May I look at that?

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2067. Certainly. (*List handed to witness*)?—I fancy this would be a memorandum to one's agent.

2068. But it is headed "Scotch Whiskey"?—Yes, it is; but that does not go to the public; that would be a memorandum to our agents. That is a memorandum of some alterations of tariff which is sent to our agents, and when we get our list out we should alter it.

2069. I trust you will not misunderstand the reason of my asking you?—Certainly I do not. I admit that is a little vague.

2070. At the time you issued this leaflet you were under the impression, like many other people, that whiskey blended with Scotch grain might be legitimately described as "Scotch Whiskey"?—That was simply a memorandum to our agents showing the changes that were made.

2071. But still it is called "Scotch" there, is it not?—Certainly, but that does not go to the public. *These* are the lists that go to the public. (*Producing lists.*)

2072. This leaflet is dated September 14th, 1905?—That is to the trade—to our agents, and not to the public.

2073. But still it is described as "Scotch Whiskey"?—We did not want to sell that to the public as Scotch whiskey. It is simply information for the trade.

2074. But what would that mean but that you considered that "Provost Whiskey" is Scotch whiskey?—We did not issue it to the public, but we had to head it with something.

2075. Have not your views on that point rather altered during the last three years?—I do not think they have. I think we did after the trial make some slight alteration. In any list to the public we never called it "Scotch Whiskey."

2076. I think that in September, 1905, you must have still been under the impression, in common with many others, that such a blend of whiskey could be legitimately described as "Scotch Whiskey?"—Yes, we might have thought so, but as a matter of fact we did not sell it to the public as Scotch whiskey.

2077. You have somewhat altered your opinion that it could be considered generically as Scotch whiskey?—No, I do not know that we have. If we felt that we could have sold it as Scotch whiskey we could have saved thousands of pounds and made a great deal more money by putting grain into our Scotch whiskey.

2078. The list that I have here is your list to the public?—Yes.

2079. "Blended Whiskey" there comes under the principal heading of "Scotch Whiskey." That list did go to the public?—Yes.

2080. Would not any one of the public looking at that list regard it as Scotch whiskey?

2081. (*Chairman.*) It gets a little bit away from your last answer?—This list did go to the public. I think myself if I had altered that I should have put it under "Blended Whiskey" in red, and then started another heading.

2082. (*Mr. Guillemard.*) You would have to make your top heading in your list "Whiskey," and not "Scotch Whiskey"?—Yes. I believe we are doing that in our fresh lists. We are putting it in under "Blended Whiskey."

2083. That does not take it out of the term "Scotch Whiskey"?—This is the list we are now sending round to our customers. (*Handed to the Commissioners.*) (*Dr. Horace. T. Brown.*) There is nothing about "Scotch" here. I am not saying that they are not Scotch whiskey.

2084. (*Chairman.*) What is the date of the list that you have just put in?—That list was issued this year.

2085. (*Dr. Horace T. Brown.*) This paper dated September, 1905, was before the Judgment?—It was about the same time. We have only sold blended whiskies for about five years. I think that was just before the Judgment. We never used to sell patent still spirit at all.

2086. Is it your experience that if a Scotch pot distiller were to use grain of any kind with Scotch whiskey he ought to declare it?—No, but he ought not to call it pure malt.

2087. Scotch whiskey, not pure malt. You would not rule that out of Scotch whiskey?—Certainly not.

2088. Does not that interfere with your definition of Scotch whiskey which only includes malted barley and the pot still?—I never heard of anybody using anything but malted barley.

2089. Is there any reason why in Scotch whiskey there should not be used a certain proportion of unmalted grain?—I have never heard of it being done. I know we would not do it.

2090. Would you make it impossible for that to be done without declaring that a certain amount of grain is used?—If anyone wanted to do it I should not mind it.

2091. Then you must alter your definition of Scotch whiskey?—My idea is that no one has ever wanted to do it, and why anyone should want to do it I do not know.

2092. It seems to me somewhat unfair that a Scotch distiller should be called upon to declare any material he used other than malt, when an Irish distiller is quite free to use any unmalted grain he likes which is indigenous to the country?—You see Irish whiskey is one article, and Scotch whiskey is another. I do not see why they should want to make Scotch whiskey in Ireland or Irish whiskey in Scotland.

2093. It might be desirable for a Scotch distiller to use a certain amount of raw grain, and it is quite possible that it is used?—Perhaps some other distiller could give you some information. We have never heard of it, and I know that we have never used it.

2094. Now, I want to put to you a question about a remark you made upon bonded spirits. You stated that it was desirable that all Scotch and Irish whiskies and blends should be matured in bond for at least three years. I am not quite clear about the meaning of that. Does it mean that all blends after blending ought to be kept for three years, or that the individual constituents of the blends must be at least three years old?—I meant the individual constituents.

2095. Then you would apply this compulsory bonding to the patent still product as well as to the pot still whiskies?—Yes.

2096. But you have told us that the patent still product is practically a neutral spirit. Why should the patent still distiller be called upon to bond a product which is not going to alter materially during the process of bonding?—I think it does alter a little. I will not say that it makes much difference, but it certainly would be handicapping the pot still distiller, and put him in an even worse position than he is at present.

2097. You mean from a trade point of view?—Yes. I do think that grain does soften to a certain extent, it gets a sort of flavour from the cask, and gets a certain roundness from maturing.

2098. I cannot quite see the justice of that?—I am afraid it is because it is producing something which may be cheaper, and which may or may not be better in flavour, and it is a thing which matures more rapidly, or perhaps does not mature at all.

2098*a*. Why should that be kept back for two or three years whereas the other man's product is not?—I do not say that as an absolute reason, but I simply give it as one reason.

2099. A patent still spirit would then become dearer than it is at present?—Yes, it would make it dearer.

2100. Why do you recommend that Scotch whiskies and Irish whiskies should be kept in bond for not less than three years? Is it in the interest of public health at all?—No. I will not give any opinion on public health, but I think raw whiskey must be bad for one. I should be very sorry to drink it myself.

2101. Then it is putting it on the ground of public health?—Yes, I think it would be bad for one to drink it just fresh from the still.

2102. You believe a new Scotch or Irish pot whiskey is not a healthy drink?—I should think not.

2103. That is pot still whiskey, of course?—Yes.

2104. (*Chairman.*) Is there anything you would like to put before the Commission?—You have asked me

some questions with regard to prices. I have a trade list which might be interesting to the Commission. There was recently a sale by auction of malt whiskies, and grain spirits, and that list I should like to leave with you.

2105. That gives a comparison between the two classes?—Yes, that does give a comparison between the two classes.

2106. We will have that, because we want a comparison.

(*Dr. Horace T. Brown.*) The ages are on them?—Yes, the ages are on them, and the dates of bonding.

The witness withdrew.

Mr. Gerald Mooney, called.

Mr. G. Mooney.

2107. (*Mr. Guillemard.*) I think you are a Justice of the Peace for Dublin?—Yes.

2108. And Chairman and Managing Director of J. G. Mooney and Company, Limited, of Dublin, Belfast, and London?—Yes.

2109. What is the nature of your business?—We are retailers.

2110. Is that actually retailing to the public yourself?—Yes.

2111. Through licensed houses?—Yes.

2112. Licensed houses that belong to you?—Yes.

2113. Do you have any limitation as to the class of whiskey that you sell?—We principally sell Irish whiskey.

2114. How would you define Irish whiskey?—Irish whiskey, as known to the trade generally, is whiskey made from malt or unmalted barley distilled in a pot still.

2115. In Ireland?—Yes.

2116. From what materials?—Of course, I am not a distiller, but I understand that it is generally known to the public that it is made from malt or unmalted barley or other substances indigenous to Ireland.

2117. You get your whiskey, of course, from certain firms?—Yes.

2118. What guarantee have you, so to speak, that you are selling Irish whiskey and nothing but Irish whiskey?—We only buy pot still from the distillers, and we keep it in bond for a certain number of years and then blend it.

2119. You have it from distillers?—Yes, who sell nothing but pot still.

2120. It is not blended so that you are quite sure that what you get is Irish whiskey made in a pot still?—Absolutely sure.

2121. You do not mix it or blend it yourselves with anything?—We blend them together.

2122. But not with anything except the product of the pot still?—That is so.

2123. Do you think your customers generally know that they are getting what you define in that way as Irish whiskey?—Certainly.

2124. Do they ask for Irish whiskey?—Yes, they ask for Irish whiskey.

2125. Always?—We sell some Scotch whiskey.

2126. You do?—Yes.

2127. If a customer came into your shop and said, "I want whiskey," it is natural, I expect, being in Ireland, that you would assume that he meant Irish whiskey?—Certainly.

2128. You would only give him Scotch whiskey if he asked for it?—Yes, only if he asked for it specially.

2129. The general demand in Ireland is definitely for Irish whiskey?—Yes, there is very little Scotch sold

2130. If there was any spirit made from a patent still in any spirit that was sold to you you would not consider that to be Irish whiskey?—Certainly not.

2131. I see you mention incidentally here that patent still spirit or even pot still may be made from Indian corn. Do you happen to know whether in Ireland any Indian corn is actually used in pot still?—I do not, but I should say that it is not so.

2132. I thought by it appearing in the note of your evidence that you knew of the existence of such a thing?—I have heard that such a thing might be done, but I think it is very improbable.

2133. Then what would be your reasons for excluding patent still spirits from the name of whiskey altogether?—The public generally understand Irish whiskey as being distilled from a pot still, and we also sell Irish whiskey in London. When we established our business for Irish whiskey in London it was to sell pot still whiskey only as Irish whiskey.

2134. You would not sell patent still spirit as whiskey at all?—No, the public would not understand patent still whiskey to be Irish whiskey.

2135. You sell a certain amount of Scotch whiskey?—We do.

2136. As whiskey?—Yes.

2137. That surely is largely composed of patent still whiskey?—That I cannot tell you. We do not blend that ourselves, but we buy it from the blenders.

2138. So that really what it comes to is this, that unless you buy from certain definite houses which you know only manufacture in a particular way, it is a rather important point that you as retailer cannot tell what is being supplied to you?—I am speaking of Irish whiskey.

2139. I am speaking now of Scotch whiskey?—As to Scotch whiskey we could not. We buy it from the blenders.

2140. You ask for something under the name of Scotch whiskey, you get something, and you sell something, and do not quite know what it is?—We sell it as blended whiskey—as whiskey.

2141. You have no doubt that there is patent still spirit in it?—I really know nothing about Scotch whiskey.

2142. I think you may take it that the chance of the Scotch whiskey that you sell never having any patent still spirit in it is rather remote?—I should think if there is any patent still spirit in it it is very small. The blend we use is very high class, and if there is any patent still spirit put into it it is merely for the purpose of modifying the spirits. The curious thing about Scotch whiskey, as I understand, is that it requires a little patent still spirit to make it perfectly clear, that is when it is reduced. I understand that they do put even in the very highest class of blends a very small quantity of grain spirit in order to make the whiskey perfectly clear and bright when it is reduced for sale.

2143. But still you do get your two products. You are selling Scotch whiskey which has grain spirit in it as whiskey?—I presume so.

2144. You would not sell as Irish whiskey that which had a blend of grain spirit in it?—No. I make that distinction between Irish and Scotch.

2145. What do you rest that on—long custom?—Certainly. It should be understood thoroughly that Irish whiskey is distilled from pot still, and pot still only.

2146. Have you formed any idea why the public have come to that view? Is it simply that they like the flavour, or is there any idea of health or anything else in it?—I should think it has a good deal to do with the flavour.

2147. Principally the flavour?—Yes, principally the flavour, in fact it is almost altogether the flavour, and also the question of age. Pot still is never, or very seldom, used under three years old, and we never use it under five years old.

2148. You do a considerable trade?—Yes.

2149. Could you give me any indication of the size of the trade you do, so that we could judge?—We have several houses in London, a house in Belfast, and several houses in Dublin, and our trade is very

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extensive on account of that. I should think we are almost the largest retailers in the United Kingdom.

2150. Could you give the Commission any idea of the amount that you do sell to the public? I do not want to press you if you would rather not tell us?—I could not give you the exact figures, but it is very large.

2151. You do not want to go beyond that?—No.

2152. Now to go away from Ireland to England, I see you say that Irish whiskey is not so popular in England. Can you give any explanation of that?—I rather think the reason of it is that the blends which were used in England were not very satisfactory, that is to say, what was sold as Irish whiskey up to a certain time. I think it has improved recently, but what was sold as Irish whiskey was not very satisfactory, that is to say, the blend, and on that account it got rather a bad name. Irish whiskey, for that reason, got rather a bad name. I think it was owing to a great extent to some patent still spirit being used. However, things have been improving recently.

2153. Then with regard to the trade terms, when you buy whiskey how is it described in the trade? Under what names is it sent to you?—If you asked a broker in Ireland for whiskey he would not sell you patent still spirit as Irish whiskey. Whiskey, as known by a broker, would be pot still altogether. He would not offer the patent still at all if it was Irish whiskey.

2154. Do you know any distillers in Ireland that produce plain patent still spirit and nothing else—not blended?—Yes, there are distillers in Ireland who produce patent still spirit.

2155. And nothing else?—I am not quite sure. They may produce pot still, but there are several who produce patent still and sell it as patent still.

2156. What do they describe it as?—As patent still, and not as grain.

2157. Not as whiskey?—I never bought any, so I cannot speak of it.

2158. (*Dr. Horace T. Brown.*) You have expressed an opinion in your *précis* that the effect of patent still spirit on the consumer is different from that of pot still whiskey, that a man gets drunk much more quickly on patent still spirit, and that the after-effects are generally considered to be much more severe. Is that an opinion based on what you have seen yourself, or what you have heard from others?—It is simply from hearsay.

2159. You are not prepared to substantiate that from your own observation?—No.

2160. (*Dr. Cushny.*) When you buy Scotch whiskey do you buy it as Scotch whiskey, or in what form?—We buy it as blended Scotch whiskey.

2161. Not as a pot still and patent still mixture?—Some few years ago we asked the people we buy our Scotch whiskey from to give a guarantee that what they were selling us was pure pot still, and they wrote this letter, if I may read it: "If you prefer to run pure malt whiskies in all your establishments we shall be very pleased to send you in a sample. There will be very little difference in the whiskies as the proportion of grain in your blend is very small, and only added so that the blend may stand quite clear when reduced." We wished to sell nothing but pot still, but they told us they could not send it as satisfactory whiskey as regards brightness and clearness unless it had some patent still in it to bring it to the necessary clearness. That only refers, of course, to Scotch whiskey. I know that Irish whiskey does not require anything of the kind, and in fact it would be very deleterious to put patent still spirit into it.

2162. But you accept it that some patent still spirit is admissible in Scotch whiskey?—The only knowledge I have of it is from what the blenders told me.

2163. That is rather important, as you are practically a member of the public in regard to Scotch whiskey, and an expert in regard to Irish whiskey?—Yes.

2164. (*Dr. Bradford.*) Do you think drunkenness is produced more readily because more of the patent still spirit is drunk, or do you think that it is due to some difference in the spirit?—I can only say from what I see, and I think that patent still which is sold in a new condition and is very strong, of course, is more likely to make a person drunk than pot still when it is four or five years old.

2165. You attribute it to age?—Yes.

2166. You said a moment ago, I think, that the addition of patent still spirit to pot still spirit was deleterious?—Yes, I did.

2167. Is that on account of newness or rawness?—Yes. Generally speaking, I do not think it improves very much by age. I have seen samples of five or six years old patent still, and I should not think there was very much improvement in it at all.

2168. I wanted to ascertain why you thought the addition of patent still spirit to pot still was deleterious?—That is the reason I think, that it is strong, and it has a bad effect. That is my opinion, of course.

2169. I wanted to get your opinion on the matter?—That is my opinion.

The witness withdrew.

Mr. E. P. O'Kelly.

Mr. Edward Peter O'Kelly, called.

2170. (*Dr. Adeney.*) You reside at St. Kevins, Baltinglass, County Wicklow?—Yes.

2171. You represented the County of Wicklow in Parliament?—Yes, I did for some time.

2172. Until when?—1895.

2173. You are now chairman of the Wicklow County Council?—I am.

2174. And chairman of the Baltinglass Board of Guardians?—I am.

2175. You also act as land agent to Mr. Hume?—Yes.

2176. You are engaged in business as grocer and publican in Baltinglass?—I am.

2177. How long have you been engaged in that business?—I have been engaged in it from 1879, but my father was engaged in it before me since 1832.

2178. So that you have had a very considerable experience?—Yes, a very long experience indeed.

2179. What does your trade consist of? You act as a wine merchant as well as a spirit merchant?—Yes, and also as grocers and publicans.

2180. You sell spirits in a public house across the bar?—Yes.

2181. What kind of whiskey do you sell?—We sell nothing but pot still whiskey pure and simple.

2182. Do your customers never ask for anything else but pot still whiskey?—Yes; in fact they would ask for malt or other whiskey, but they never on any occasion ask for patent still whiskey.

2183. But when they do ask for whiskey you understand them to mean Irish pot still whiskey?—Yes.

2184. Have you any knowledge of the age of the whiskey that you sell?—Yes, I know the age of all the whiskey I sell.

2185. What is the minimum age?—The minimum age of the whiskey that I ever sell is four years old.

2186. Of course you have had considerable experience and have seen the effect of whiskey upon your customers?—I have.

2187. Have you formed any opinion as to the effect of the Irish whiskey?—I find the older it is the more moderate it is and the less effect it has, of course, on the person.

2188. You practically have had no experience of the effect of patent still whiskey?—I never saw patent still whiskey until yesterday. Once about 12 years

ago I was offered it in order to have a cheap whiskey and I did not buy.

2189. Why did you not buy?—The reason I did not buy was that if I sold this patent still whiskey and the people knew that they were drinking the produce of what they call pig-corn I think they would leave me.

2190. And you would lose your reputation?—Yes.

2191. Do your customers actually know anything of patent still spirit?—I think not. In the village I come from, although there are 16 or 17 publicans, I do not think there is a gallon of patent still whiskey sold in the place.

2192. I suppose they have all been open to the temptation to sell cheaper whiskey?—I do not know. I was tempted myself.

2193. With regard to the difference in cost between patent still spirit and pot still spirit would the difference in the first cost to you be large?—Patent still spirit would be about a third of the cost of pot still. The price I was offered patent still spirit at, it is a number of years ago, and, of course, it has become cheaper since, was 2s. a gallon.

2194. (*Chairman.*) As against your ordinary price of what?—From 5s. to 7s. or 8s. or 9s. sometimes.

2195. (*Dr. Adeney.*) You think that Irish people, or, at any rate, your customers, have become so used to Irish pot still whiskey and know its effect from a health point of view, that they would not under any consideration change?—I do not think they would, and the taste of the public, even the poorer class, has improved very much, and they go in for a much better article now than they did 20 years ago.

2196. Is the consumption of whiskey in your district increasing?—No, it is decreasing.

2197. (*Chairman.*) Did you make any sale of Scotch whiskey at all?—It is infinitesimal, my Lord. I do not suppose we sell 2 gallons of Scotch whiskey in the year in my establishment.

2198. Is there sufficient trade in Scotch whiskey for you to keep it in stock in your particular house, or do you supply it to some particular class of customer?—A person will occasionally ask for a glass of Scotch whiskey and we would sell it to him.

2199. Take the two, a pure Scotch whiskey and Irish whiskey. I understood that Irish whiskey had some particular flavour in it, that it had a rather more smoky flavour than Scotch whiskey?—It has quite a distinct flavour. Scotch whiskey always reminds me more or less of Hollands gin in flavour, and it has a sort of smack of what I have met a few times in what I term the old potheen.

2200. That was all right was it not?—It generally did not get a chance. It was consumed too quickly.

2201. Except under penalties?—Yes, my Lord.

2202. Of course you in Ireland, in the same way as with Guinness' stout, regard Irish whiskey as the superior drink?—Yes, Irish whiskey is considered to be the best.

2203. You have no blend in that?—No, we never blend two Irish whiskies. We always sell them as they come in.

2204. Not blended?—We always in our place sell Jameson's whiskey and Power's whiskey, and any other whiskey as coming direct from themselves without being blended with other whiskey.

2205. You sell it as Jameson's whiskey?—Yes, as Jameson's whiskey or as Power's whiskey, as the case may be.

2206. Would that be the same of a bottle, or if a customer came in and said, "I want a glass of Jameson's whiskey"—would he get it?—They often do ask for a glass of Jameson's whiskey, or a large Power, or a small Power, as the case may be, and they always get the whiskey they demand.

The witness withdrew.

Mr. Dominick Justin Daly, called.

Mr D. J. Daly.

2207. (*Dr. Horace T. Brown.*) I believe you are Chairman of Messrs. M. D. Daly and Sons, Limited?—Yes.

2208. The business being that of wholesale wine and spirit merchants?—Yes.

2209. You are also Vice-President of the Cork Chamber of Commerce, I believe?—Yes.

2210. Your firm has been in existence for a considerable time?—Yes, a very long time.

2211. For 100 years, I think?—Yes.

2212. You have yourself been in the trade for how long?—For close upon 30 years.

2213. Besides the wholesale trade, you have also a certain amount of retail trade?—Yes, we have one house with an off-licence for supplying families.

2214. You state in your *précis* that you have no interest in any distillery either pot or patent?—That is so.

2215. Can you give us any definition of Irish whiskey and what it ought to be?—Yes. Everyone in Ireland, I think, considers that Irish whiskey should be made in the pot still from barley, malted or unmalted, with small proportions of cereals grown in Ireland.

2216. You say something in your *précis* about the necessity for Irish water?—Yes, we consider that the water has a great deal to do with the flavour of whiskey.

2217. You know of the patent still spirit, I suppose?—Yes.

2218. And you are convinced that that is not entitled, either by itself or blended, to the name of whiskey?—No, I am not. I do not go so far as that. I say it is not entitled to the name of "Irish Whiskey." I hope this Commission will define for us what is whiskey.

2219. You maintain that the patent still spirit is not entitled to the name or to be sold as Irish whiskey?—Yes.

2220. Blended or unblended?—Yes, blended or unblended.

2221. You maintain that it is a totally different thing from Irish whiskey?—Yes, totally different.

2222. In what respect is it different?—I look on patent spirit as practically pure alcohol. I consider Irish whiskey, old Irish whiskey, a round, full-flavoured, excellent spirit that cannot be surpassed.

2223. The greater part of your business is in Irish whiskey?—Almost all.

2224. You do a certain amount of blending?—Yes, a little—we have to do that. We do not encourage it, but we have to do it.

2225. What is this mixture that you sell?—It is a mixture at a price to compete. Travellers come round to our customers—small shopkeepers in the country—and go from place to place and represent to them that they are paying too much. Then we are asked if we can compete with these people, and we say: "We can give you what they can give you, and we will give it to you at the same price." We are in business to sell.

2226. You state that in order to compete with them you commence selling a particular blend or mixture of as much as 80 per cent. of patent still, and 20 per cent. of pot still?—Yes.

2227. But that you never sell it as Irish whiskey?—No.

2228. Under what name do you sell it?—We sell it as whiskey, and we always invoice it as "Whiskey."

2229. You admit it is whiskey?—We must do trade. They are all round me selling this as whiskey. As I say, I hope the Commission will be able to tell us whether it is whiskey or not.

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2230. If it is shown not to be whiskey you would stop selling it?—I would.

2231. Or sell it under some other name?—Yes; I would sell it under the name we buy it as.

2232. You buy patent still spirit from Northern firms and blend it yourselves?—Yes.

2233. What price do you pay for your patent still whiskey?—It averages about 1s. 4d. to 1s. 8d.

2234. Is that proof?—No, strong 25 over proof.

2235. You mix that with pot still spirit which you get from the distiller?—Yes.

2236. And he charges you what?—Our chief business is bonding the different makes of the different distillers and keeping their whiskey in bond and selling it matured. That is our chief business—we are large bonders of Irish whiskey. Then when we want it for this cheap whiskey we get a little fairly old pot still—pot still about two or three years old and blend, say, 20 per cent. of that with the patent spirit in order to compete with the cheap whiskies.

2237. So that your pot still spirit at 2 or 3 years old costs about 5s. a gallon?—About 4s.

2238. You state in your *précis* that it is 5s.?—Yes, 4s. to 5s.

2239. That is mixed with patent still spirit which costs from 1s. 4d. to 1s. 7d.?—Yes.

2240. Can you tell us what you sell that blend at?—It depends upon the strength. So much of it is duty. If it was 20 per cent. over proof, roughly speaking, the duty would be 13s., and if it was 20 per cent. under proof, speaking roughly again, the price would be 9s. for the duty only. Of course, there is then the price of the whiskey.

2241. Comparing it at proof with the price that you get for the Irish whiskey alone, what difference would there be with or without the duty? It does not matter, but let us have it without the duty first?—We only sell it duty paid. We do not sell that cheap spirit that I have described to the retailers unless it is duty paid.

2242. What would be the price, duty paid, of your Irish whiskey 2 or 3 years old?—It would be about 18s. 6d.

2243. Per proof gallon?—No.

2244. 25 per cent. over?—No, the 3-year-old would be about 14 or 15 per cent. over.

2245. At the same strength of 14 or 15 per cent. over, what should you expect to get for this blend of 80 per cent. patent still and 20 per cent. of pot still spirit?—About 16s.

2246. At the same strength?—Yes, 16s. 3d. or 16s. 6d.

2247. So that there is a difference of about 2s.?—Yes.

2248. You are of opinion that you could not sell patent still spirit as Irish whiskey to your customers?—Yes.

2249. And do you also maintain that a patent still spirit, wherever it is made, has the same flavour and quality?—Yes, that is my opinion.

2250. Whereas you maintain that Irish and Scotch whiskies are distinct articles?—Quite.

2251. If a mixture of patent still spirit and pot still spirit is mixed and sold to the public as Irish whiskey, you consider that fraudulent?—I do. I consider that it is not what it is represented to be.

2252. I am taking your own words in your *précis*?—Yes.

2253. You also believe that it would be a very good thing in the interest of the consumer if all pot still whiskey had to be matured for at least 2 years?—Yes, that is my opinion.

2254. On what grounds do you base that opinion? Is it on the grounds of public health?—Yes. I think that pot still whiskey should be two years old at least before it is sold.

2255. You think it is unwholesome before it is two years old?—Yes, I would say that. I think that very little is sold, because it improves so much that everyone does keep it as a matter of fact.

2256. I suppose the flavour materially improves?—Yes.

2257. You would not like to drink a new pot still whiskey?—No.

2258. With regard to the question of flavour, do you think there is a deleterious flavour in the new spirit?—New pot still whiskey is nasty—raw.

2259. You would not be able to sell pot still whiskey until it reaches a certain age?—Very little is sold in Ireland.

2260. Would you require the law to step in and insist upon bonding it for two or three years when you know that the whiskey is not really fit to drink under that time?—I think it would be a good thing in the interests of Irish whiskey if all pot still whiskey were kept two or three years in bond.

2261. I do not quite see why. Perhaps you can make that clear to the Commission?—The improvement in the spirit is so immense.

2262. Are you now speaking of improvement in flavour?—Yes, I think the bye-products which are very nasty pass away.

2263. Do you not think the public could take care of itself as regards flavour?—I am afraid up to the present they have not been taking care of themselves at all in the matter of Irish whiskey, especially in England.

2264. You said that pot still Irish whiskey is not harmful in itself?—That is so.

2265. It may not be pleasant to drink, but it is not harmful?—You are now taking me beyond what I can go really. I do not really know that as a matter of fact. I know what I like myself, but whether it is injurious or not I do not know.

2266. But if it is not injurious why do you think it necessary that it should be two years old?—Because the spirit improves so very much.

2267. Improves in flavour?—Yes.

2268. But you do not know of any improvement in any other respect?—I think it is more wholesome for one thing. I have been told, and I have heard, that these bye-products which are very nasty pass away after two or three years, and then the spirit is mellow and wholesome as compared with when it is new.

2269. You take that opinion from others?—Yes, from what I have heard.

2270. (*Dr. Adeney.*) You blend yourself, do you not?—Yes.

2271. So that you could answer this question: Does the blending with patent still whiskey or spirit have the effect of masking the flavour of new whiskey?—Yes, in young whiskey I would say so.

2272. So that by blending with patent still spirit you can use a newer pot still whiskey?—Yes, I should say so, certainly.

2273. Than in the case of unblended pot still whiskey?—Not Irish whiskey, of course, but new spirit.

2274. I am talking about pot still spirit?—Yes.

2275. You come from Cork?—Yes.

2276. Are there any distilleries in Cork?—Yes.

2277. How many?—Three—two under one management, and another.

2278. Can you give us those?—The Cork Distillery Company at Midleton, and also a distillery in the North Mall.

2279. Are they all pot still?—At Midleton there is a patent still.

2280. Do you know anything of the character of the products?—No.

2281. (*Dr. Cushny.*) You say you sell a blend to publicans in your district. Under what name do you sell that blend?—As whiskey.

2282. Do you know what they sell it as?—They sell it as whiskey.

2283. Or as Irish whiskey?—No, I do not think it is known as Irish whiskey. I am quite sure the general run of people would not drink it as Irish whiskey. The flavour and quality of Irish whiskey is very well known.

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2284. Do you sell any Scotch whiskey?—No, very little.

2285. Where do you get it? Do you get it from a blender, or a distillery, or where?—We get a little chiefly in bottle. We buy it direct from the distillery.

2286. Is that pure pot still whiskey?—Yes, pot still.

2287. (*Mr. Guillemard.*) With regard to that blend of yours, in what form do you pass that blend on? Do you pass it on in cask or bottle?—In cask principally.

2288. Do you mark it in any way?—No.

2289. What do you put on the cask?—There is a circle with "D & S" on the top.

2290. That means Daly & Sons?—Yes.

2291. Do you put anything else on it?—No.

2292. You do not put anything in the nature of a notice to let people know what there is inside it?—No, because we are in business to try and make money. We have great hopes that this Commission will tell us one way or the other something that will guide us.

2293. I think that we are rather reversing the order of things; we are trying to get information from you, and we shall found our opinion partly upon what you tell us?—All I have to say, now that I am on this question, is that we have a proved case at Islington, where there was 90 per cent. of patent still spirit. The distiller invoices a certain thing to the blender as grain spirit, and the blender adds 10 per cent. of something and sells that as Irish whiskey. Could there be a greater fraud on Irish whiskey?

2294. But still it is a question of proportion, because a good many people would approve of that blend that you sell being sold as whiskey?—I am not at all in love with it myself.

2295. You are simply driven into it because other people do it?—I do it, but I do not like it.

2296. The real reason you sell it, I take it from your evidence, is that people demand a cheaper whiskey, and to give them whiskey at that price you had to turn out this blend?—Yes, an enterprising traveller comes round and persuades them that they can get a thing much cheaper, and the customer comes to us, and we have to sell him a cheap whiskey.

2297. Your sale is to the retail dealer?—Yes.

2298. Do you know at all how his price to the consumer is affected?—It is not affected at all. The consumer suffers.

2299. The consumer pays the same?—Yes.

2300. You mean, then, that if you analysed the demand that leads to the sale of that whiskey, the demand is only by people who wish in selling it to make a bigger profit? It is not a demand by the public?—Certainly not.

The witness withdrew.

Mr. Cornelius Arthur Nash, called.

Mr. C. A. Nash.

2301. (*Mr. Guillemard.*) I think you were for some years with Messrs. J. and J. Allingham, of Capel-street, Dublin?—That is so.

2302. Towards the end of your time you were manager of the business?—Yes.

2303. What was the nature of Messrs. Allingham's business?—Dealers in wines and spirits.

2304. Did that include blending?—Yes, inasmuch as we blended some brands of Dublin whiskey—pot still blended with some different brands.

2305. Some pot still with other pot still?—Yes.

2306. Your house did not do any blending of pot still with patent still?—We never did anything at all in patent whiskey. We never do it.

2307. Then what was the principal business of Messrs. Allingham? Was it selling to the retail trade?—Yes, and privately.

2308. Was that sale entirely confined to the sale of Irish whiskey?—No, there was some Scotch whiskey sold, but it was scarcely worth mentioning.

2309. It was sold as Scotch whiskey?—Yes, it was sold as Scotch whiskey, and it was Highland malt.

2310. Since you left Messrs. Allingham can you tell us what your connection with the spirit trade has been?—I represent several foreign houses in the wine trade, and I am a dealer in all different brands of Irish whiskey as well.

2311. You are a blender?—No, not at all, a broker would more correctly describe it.

2312. In the light of your experience how would you define Irish whiskey?—I have always understood Irish whiskey to be made in a pot still of either malt or unmalted barley and a certain proportion of, say, wheat and oats.

2313. Any other grains?—Perhaps a little rye.

2314. All those would be grains actually grown in Ireland?—Altogether.

2315. Would you exclude grains of the sort that could be grown in Ireland but are imported from somewhere else, or do you mean grain grown in Ireland actually?—I have not the experience of an actual distiller, and I do not know whether some distillers would find it necessary, through, perhaps a shortage of home-grown corn, to buy barley, say, that would be grown in the British Islands. I do not suppose that that would be necessarily excluded from the category of cereals admissible for the pot still.

2316. Then the main elements of Irish whiskey in your view are the pot still, and the locality Ireland? It must be made in Ireland?—Yes.

2317. You said during your business career the only spirit you have sold has been Irish whiskey?—Altogether.

2318. I take it that, put into other words, means that that is what the people wanted?—Yes.

2319. You have not in any way tried to influence the sale?—No.

2320. But it is simply that the people came to you for it?—Yes, we gave them what they asked for.

2321. As a rule when people came to you with an order did they ask you for so much Irish whiskey, or so much whiskey?—They sometimes would ask for the produce of a certain distiller, and in that case we gave them the make of that distiller, or they asked for fine whiskey, that would be a blend of the pot still whiskey of two, or perhaps three, Dublin distillers.

2322. Of course, you in your time have come across patent still spirit. Could you tell us what, in your opinion, is the principal difference between it and Irish whiskey?—The two things are altogether different. I look on patent spirit as pure alcohol, and nothing more.

2323. You would go so far as to say that it is, in other words, a silent spirit?—My acquaintance with the article is very distant. I have never been on speaking terms with it at all.

2324. So that really your opinion on that is only what other people have said about it to you?—Quite so.

2325. You do not buy, but can you give any idea of the difference in price that there is between the two if you were buying patent still and pot still? You heard the evidence of the last witness?—Patent still, 1s. 4d. to 2s., I think I heard him say. Dublin whiskies always vary considerably in price. You must look at them first as regards their bonding price, but they vary from about 3s. 10d. to 5s. Then, of course, as whiskies get older they have a certain market value which increases with every year. Some whiskies ten years old would be worth perhaps 12s. or 13s. a gallon, and I do not know that the patent still whiskey will be worth anything approaching that at any age.

2326. In connection with the improvement by age, have you any views as to the desirability or not of

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compulsory bonding?—I should say that if there are people who sell cheap pot still whiskey very young, under two years old, it would be better that it should remain at least two years in bond. My reason for saying that is that I have always heard, and I know from the taste of the spirit, that up to that age it is very coarse, even the very best makes, and perhaps the better the make the coarser it is in its youth.

2327. The longer you keep the pot still whiskey in bond the higher the price that is obtainable for it?—Certainly.

2328. Do you not think that in itself is sufficient stimulus to people to keep it in bond if the alternative is selling a worse article at less profit to people who would not like it?—I must distinguish there because the holder of whiskey, the man who bonds whiskey, will do better by selling it at three or four or five years old than he would by selling it at two years old. In the first place there is a greater loss of quantity during the first two years of the whiskey being in bond. The loss during the first two years is not in proportion to the subsequent loss, but the retailer who would sell the cheaper whiskey of course does not keep it in bond, but simply buys it, and would make more money out of what he buys cheap than what he would pay a higher price for.

2329. Do you think that legislation is necessary to insure the pot still spirit being kept in bond for a certain time; I am speaking generally?—Yes, I do.

2330. You think it is really required?—Yes, I do.

2331. I suppose you have come across traders who sell patent still spirit either alone or blended with pot still. Under what description do they sell it in your experience?—I cannot speak from any practical personal knowledge in the matter.

2332. I see in your *précis* you say that such people never disclose the fact to the public; that is to say, that they never disclose to the public that there is a blend of patent still spirit. Do you not think that is, perhaps, too general a statement? I do not know whether you were in the room this morning when Mr. Gilbey gave his evidence?—Yes.

2333. He does a considerable business?—He does, and I fear there are very few who do business on Mr. Gilbey's lines.

2334. Then Mr. Gilbey's evidence has modified the idea that you had before as to that?—Of course it has to a certain extent, because I have seen price lists of various people whom I have known as blenders of patent still, and I do not think they ever mentioned that on their labels, or on their price lists.

2335. Then the statement in your evidence would not amount to very much more than this, that there are people selling patent still spirit either alone or blended with pot still spirit who do not call attention to the fact?—I am afraid so.

2336. As regards the description in the trade—the trade selling to one another—is it your experience that patent still spirit is described as whiskey or not?—As grain spirit.

2337. Would you say that was universally so?—I think so.

The witness withdrew.

Adjourned for a short time.

Mr. T. Doolan.

Mr. THOMAS DOOLAN, called.

2338. (*Dr. Cushny.*) You are a wine and spirit merchant?—Yes.

2339. Where?—At Waterford.

2340. Trading as?—T. and H. Doolan.

2341. Is your connection chiefly in the South of Ireland?—Chiefly in the South of Ireland.

2342. You sell wholesale?—Wholesale and retail, both; more in the retail, perhaps; retail and family.

2343. How long have you been engaged in the spirit trade?—About 28 years

2344. All of it in Ireland?—No; I was for three or four years in Scotland.

2345. What do you understand by Irish whiskey?—I understand Irish whiskey to be what most of the Irish witnesses have stated it to be here since the Commission opened yesterday, and that is the product of malted and unmalted barley with the addition of other cereals indigenous to Ireland; oats, and so on.

2346. Made in a pot still?—Made in the old pot still.

2347. Only in the pot still?—Only in the pot still.

2348. Would you allow the patent still product to be called whiskey?—Certainly not.

2349. Not whiskey even?—Not whiskey even.

2350. What are your grounds for that?—The grounds are that in my opinion it does not contain the ingredients that are necessary to produce the characteristics of whiskey.

2351. Is that your own individual opinion or is it widespread? Is it widely held in Ireland?—Well, yes. The Irishman looks upon this patent spirit as a thing he does not want to get when he asks for whiskey. I believe that is generally understood by the man in the street.

2352. You would refuse both the titles, whiskey and Irish whiskey, to this spirit?—Yes.

2353. And to a blend?—To a blend. Under no circumstances would I allow "whiskey" to apply to it.

2354. Do you believe all Irishmen, or most Irishmen, object, and would have the same feeling with regard to it?—Yes, and they have had that feeling since the patent still was first introduced into the country, I believe.

2355. In your *précis* you give us some of the history of the making of whiskey. What changes has the making of whiskey undergone in your experience in recent years?—In Ireland I do not think it has undergone any change hardly.

2356. You talk of smugglers in your *précis*. Did they use a treble still?—They used the old pot still.

2357. Did they use the three stills as the present pot-stiller does?—Something on the same principle as the pot still of to-day.

2358. But the pot still of to-day contains three stills?—I think they used to distil it a third time. They would have repeated distillings. They might have three, I think, but I am not quite sure about that. I believe they would.

2359. You think illicit whiskey at present is distilled three times?—I do not know, but I believe that it is the method to make whiskey—I am inclined to think that it would be. The first runnings of potheen are not offered in their original state to the people.

2360. Supposing you had a bottle of patent still spirit and a bottle of pot still whiskey, what differences are there between them, do you think?—Well, I think from the construction of the patent instrument——

2361. If you had a bottle of pot still whiskey and a bottle of patent grain spirits what differences do you recognise between them, quite apart from the method of manufacture?—The one is, comparatively speaking, flavourless.

2362. Flavourless?—Yes.

2363. Any other difference?—There is not the same roundness in the flavour of it. It seems to be sharper on the palate. The pot still spirit seems to be more evenly balanced on the palate, and I believe that is from the ingredients that it contains. These little bye-products are necessary. They seem to be a very important thing in the production of it.

2364. Is that the new pot still whiskey or the old pot still whiskey?—The same principle would apply. You could see that difference in them. Of course, there is a great difference between new pot still and old pot still—a very great difference.

2365. Is there as great a difference between new pot still and old pot still as between one of them and patent still?—No; I would not say so.

2366. Then you say patent still spirit is more injurious to the consumer than the pot still Irish whiskey?—I believe so.

2367. How much experience have you of the matter?—Well, I have known districts in Ireland where patent spirit, or nearly all patent spirit, was supplied, and I have known people to drink to excess in those places and complain of the ill effects, and I have also noticed it in them myself.

2368. What ill effects did you notice?—Well, I think that the patent spirit seems to make them more violent.

2369. Did they get drunk sooner—with less of it?—I think it creates a craving for it. They drink more of it. They get a sort of craving for it—more so than with the pot whiskey.

2370. There is more a craving with the patent spirit?—I think so. It has not the same satisfying effect that the pot still whiskey has, I believe.

2371. The pot still whiskey does not satisfy a good many people?—Unfortunately.

2372. (*Chairman.*) What causes the greater craving when the man drinks?—I could not say, except that it would be the absence of these little ingredients, or essential oils, that are characteristic of pot still whiskies. It is rather a mystery.

2373. I thought it was the patent still that occasioned the greater craving?—Yes.

2374. Is it the ingredients?—It is for want of the ingredients.

2375. In the patent spirit?—Yes.

2376. That is curious?—I believe that is the reason.

2377. (*Dr. Cushny.*) Do you think it is the absence of flavour?—Yes, the absence of these ingredients which are necessary to produce a truly Irish whiskey.

2378. I should have thought that a man would get tired of drinking whiskey that had not a flavour sooner than of one which had?—They mix it. Usually there is a dash of pot still in it.

2379. (*Chairman.*) In the blend?—Yes, usually to give it a flavour and try and make it pleasant.

2380. What we are upon is what causes the person drinking to crave for more of the patent than he would require if drinking pot?—I cannot say, except that the patent does not contain so great a proportion of those essential oils and different ethers that whiskey is composed of.

2381. Do you call it a healthy craving because the taste is pleasanter, or does it produce a sinking in the system?—I could not say, my Lord, but that is what I believe.

2382. (*Dr. Cushny.*) You cannot give any other thing that there is a craving for that is tasteless or lacking in taste—there is nothing like it?—There might be the want of flavour which would make it.

2383. You cannot imagine anyone wanting a thing because it lacked flavour?—No, that is quite right.

2384. Have you any further explanation for this craving?—No, I could not give any other. I believe it is from the want of these different ingredients that are characteristic of whiskey.

2385. Do you find that in those districts where the patent still spirit is largely used that there is more drunkenness than in the pot still whiskey districts?—I could not go that far, because it is in country districts that I am now referring to where there would be only one house. That is what enabled me to state that I believe it is the cause of the violent way it makes them act when they drink it to excess. I know it to be supplied in such districts. But as to towns, I could not give you that opinion. It is only about districts where I know there is one house.

2386. You mean the patent spirit is supplied in country districts?—Yes.

2387. Is it supplied as Irish whiskey?—That would be supplied as Irish whiskey.

2388. It is supplied as Irish whiskey?—Yes.

2389. The patent still?—Yes, mixed; there might be a little mixture in it. There might be a little of the pot mixed with it.

2390. That is to say, the blend is supplied as Irish whiskey?—Yes.

2391. Do the public take that freely?—They have to take it. When the public ask for whiskey they do not think they are getting the patent. They expect to get whiskey, not patent.

2392. But they do not object to it when they get it?—They do object to it.

2393. They do object to it?—They have often complained to me.

2394. But you say they go on drinking all the same?—They would, but they suffer from the ill effects of it. When a man gets a certain quantity, even though it may be injurious, he will unfortunately take more of it, and he suffers in consequence.

2395. He cannot dislike it very much if he goes on drinking this patent stuff. Some witnesses apparently thought that the average Irishman would refuse to have patent still spirit?—So he would if he could get anything else, but in the country districts he cannot get anything else. They have only got that, and he cannot get anything else; so there is no use in objecting.

2396. (*Chairman.*) What districts are those. You say "in some districts"?—In the South of Ireland districts in my own knowledge, but I prefer not to mention them.

2397. Is this district extensive where nobody can get pot still whiskey?—I beg your pardon.

2398. Is it an extensive district where you can only get the patent still whiskey, and not the pot whiskey?—It is not a very extensive district, but there are many places in some parts of the country that I know where this patent spirit is sold as whiskey mixed with a little pot still.

2399. And no other whiskey is sold?—Well, I do not think so.

2400. Is that so sold because it is cheaper?—Yes, to make a better profit, I believe.

2401. Have you ever known persons ask for whiskey who have been given this patent still whiskey and then complain and say: "That does not come up to my idea of what whiskey is. I object to it." Do they ever do that?—Well, yes. I have known that to be done. A good judge would know it, but everybody is not such a competent judge.

2402. It is a matter of practice and experience?—Yes.

2403. Is it an objectionable practice to sell this patent spirit as whiskey? Is it condemned generally, do you think, by people?—Yes.

2404. What we should call bad form?—Yes, it would be.

2405. For instance, take yourself. I suppose you would not like to enter into the trade of selling patent spirit?—No; we are nearly forced into it, because everybody seems to be obliged to compete now. We are nearly forced into it.

2406. Does the patent still under-sell; has it got into real competition with the pot so as to under-sell it?—Yes, it does. There are wholesale houses now selling it to the trade.

2407. Is this a practice that has been increasing of late years?—Yes, I fear it is. I believe it is.

2408. Do you attribute that to the cheaper price?—Yes.

2409. Not to the taste of the customer at all?—Well, a good judge would know it, but everybody is not a good judge. I believe that the object is to make more profit out of it.

2410. Do you not think that most people are pretty good judges of what they like?—Yes, some.

2411. If this trade is increasing must that not show that the taste for this blend or this patent still is increasing amongst the Irish public?—Well, it is increasing in what I believe to be a fraudulent manner.

2412. By not telling the person?—Yes.

2413. Then we fall back on what we have just been

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talking about. As he takes it, he knows whether he likes it or not?—I do not believe that an Irishman likes patent spirit.

2414. (*Mr. Guillemard.*) In these districts where nothing is to be obtained but the patent still spirit do you happen to know if the consumer gets his whiskey cheaper on that account, or is it only the dealer?—Only the dealer.

2415. The consumer would pay as much?—Yes.

2416. Then there are really districts where people can only get the patent still product, and have to pay as much for it as they would for pot still Irish whiskey?—I believe so.

2417. You are a spirit merchant with a large connection in that district?—Oh, no; I do not say that district.

2418. There are some merchants—I do not want to make it a personal matter—but there must be merchants in Ireland in your position in that district who could go in and sell pot still Irish whiskey to these people who want it and cannot get it. Why does nobody go and sell Irish whiskey in those places?—The publicans go to the wholesale men for the very cheapest thing he can give them to sell to these people.

2419. The publican is the master of the situation?—He would be, of course, in that case.

2420. It would not be possible for them to start any system by which they could push the sale of pot still Irish whiskey?—I think they would have to be compelled to do it.

2421. They would?—Yes, they would have to be compelled.

2422. (*Chairman.*) I suppose the high price would beat the pot still distiller in the same way as it beats the publican if he went and tried to sell pot still. It would be sold at a higher price than the publican is now paying for the patent still, and that would beat him?—I beg your pardon.

2423. If the merchant who was selling pot still whiskey went into the market he would have to charge the full pot still price?—Of course he would.

2424. Would he not be beaten by the publican who is buying the patent still at a price?—Of course, the patent still would beat him at a price.

2425. Then it would bring it to an end. How could he make his market against the patent still?—With a good class of trade and people who are competent and good judges he would be able to make his market.

2426. It is the middleman who has to get to the consumer. Would the publican go and pay the pot still price?—He would if he was obliged to do it.

2427. Quite so, but I am taking the market as it is?—No; he would not pay it.

2428. (*Dr. Cushny.*) Does anyone ever ask for a special brand of Irish whiskey?—Yes.

2429. Such as Jameson's?—Yes, that is chiefly asked for—Jameson.

2430. And they get it?—Yes.

2431. When they ask for Irish whiskey?—When they ask for Irish whiskey, but they are liable to get patent mixed in some places.

2432. Is Jameson's whiskey sold at the same rate to the consumer as the patent still?—In some places it would be.

2433. If you went and asked for a glass of whiskey, would it be sold the same as if you said Irish whiskey or Jameson's whiskey?—No. In some districts it would, but probably not in towns.

2434. But in some districts?—Yes, it would.

2435. Then Jameson's whiskey is not able to drive out the patent spirit?—No; where it is worked like that, where you have no competitor.

2436. Take a public-house where you have Jameson's whiskey and patent still whiskey sold to the same consumer at the same price. If there was a great difference, would you not expect the one to expel the other?—They ask for Jameson and they manage to get it. They will ask for it and have it.

2437. (*Chairman.*) Supposing an ordinary customer goes into a licensed house and he says: "Give me a glass of whiskey"; first taking whiskey generally, and the publican has got on his shelves Jameson's whiskey and patent still whiskey, in that state of things would the publican think it right to give patent still whiskey when the man had asked for a glass of whiskey?—Some of them would.

2438. Some of them would?—Yes.

2439. I quite see what you mean by the rural places and the towns. In the towns do publicans as a rule keep two classes of whiskey?—Yes; some of them do.

2440. What would they do if they had an opportunity of selling that which suits them best in answer to the demand: "Give me a glass of whiskey"?—They would try to work the cheaper, patent whiskey off on to them if they could—some of them.

2441. If the demand of a man was "Give me a glass of Irish whiskey," would the publicans, or some of them, do the same thing and give them patent?—Yes; some of them would.

2442. That is in answer to "Irish"?—Yes; some of them would.

2443. That, you say, is the practice among some of them?—Yes.

2444. Do you ever hear of any of the consumers protesting, and saying: "I asked for Irish whiskey, and you have given me some patent still stuff, and it is not what I call "whiskey"?—They would protest against it.

2445. Do you think that occurs?—Yes; if I gave patent still instead of whiskey to my customers they would object to it.

2446. Is the publican very penitent?—I do not know.

The witness withdrew.

Mr. D. J. Daly.

Mr. Dominick Justin Daly, recalled.

2447. (*Chairman.*) I understand you want to put some documents in?—Yes, my lord. (*Handing circular.*) About the question you were asking me, I just brought a circular over that I got immediately before I left home. It has a peculiarity about it. That is taken at random, as the last circular I got before I left, and I presume that a copy of that circular was sent to every holder of a ten-guinea wholesale licence. You will see the numbers 1, 2, and 3.

2448. Apparently they are whiskey merchants or distillers?—No; I should rather call them merchants.

2449. Do they blend?—No; but they handle every commodity in the wine trade. You will see in that, No. 3.

2450. They begin by stating: "Whiskey, blended Scotch," and then the price; then blended by the person, and then the price. Then I see "Self whiskey." What is "Self whiskey"? — One make of whiskey, like Jameson's, or Power's, or anybody else's; one whiskey.

2451. Then I see: "Whiskey, Irish, distilled by the Irish Whiskey Company"?—If you follow that, No. 3, you will find the price is 1s. 10d.

2452. Quite so?—"Irish whiskey, 1s. 10d." Then you will find a very peculiar wording. It is marked "Free on rail" at three places, Belfast, Liverpool, Glasgow. That is very peculiar.

2453. In what way; what is the peculiarity?—That it is open to the construction—I am not saying it is so—that Irish whiskey may be made either in Belfast, in Liverpool, or in Glasgow, at 1s. 10d.

2454. This is free on board—that is all—f.o.b.?—Yes.

2455. It could be sent there? — It might be sent there. It is open to that also. But we know that 1s. 10d. whiskey must be pure patent still whiskey.

2456. Very well; we can draw the inferences for ourselves. We are much obliged to you.

The witness withdrew.

Mr. THOMAS JAMES SHAW, called.

2457. (*Dr. Bradford.*) You are managing partner in the firm of Joseph Shaw and Son, Mullingar?—Yes.

2458. What is the nature of your business?—Well, wholesale and retail wine and spirit merchants, grocers, etc.

2459. You deal in wine as well as in spirits?—Yes.

2460. You have no connection with any distillery?—No, and we have no public bar.

2461. Would you give us your definition of Irish whiskey?—Well, I consider Irish whiskey to be a spirit distilled in the pot still from malted and unmalted barley and other cereals which are capable of being grown in Ireland, or are grown in Ireland.

2462. You do not limit it to the cereals which are actually grown in Ireland?—No, I would not limit it to the cereals grown in Ireland, as long as the whiskey is made in Ireland.

2463. You do not consider that patent still spirit ought to be called Irish whiskey?—No, decidedly not.

2464. Would you be willing to allow the term whiskey to be applied to it?—Well, I do not think so.

2465. Would you give us your reasons?—Well, so far as the patent still spirit is concerned, I have never known it personally to be sold in its pure condition across the counter to the public. I consider it is manufactured or distilled and sold to blenders, who sell it under the name, probably, of "whiskey" to small traders in Ireland, not disclosing, in the majority of cases, the fact of what it is composed of. The situation seems to me to be very largely parallel to the position of affairs a few years ago in regard to butter mixtures, up to the time that the law declared that all butter mixtures should be sold as margarine. Before that, it was possible to mix the butters with varying proportions of margarine, and sell them, so far as price is concerned, to meet the market; and, so far as I can see, patent still spirit in Irish whiskey, or blended Irish whiskey, is used for the very same purpose. It is used to produce whiskey for a price—or to produce an article for a price, I should be more correct in saying.

2466. Your point is that it is a cheap spirit which is used to dilute a more costly spirit?—Yes.

2467. That is your point?—Yes. The law stepped in to declare these butter mixtures should be sold as margarine, and I hope the time has come for the law to declare that Irish whiskey is not a mixture but a sort of special article which should be defined.

2468. Do you base your opinion on the fact that it is cheaper, or do you base it on the fact that it is different in its composition?—I base it on the fact that it is cheaper, and I consider the blends of patent still spirit and pot still whiskey that have been sold in the market are not at all as suitable for public consumption as the old and well recognised pot still whiskies.

2469. I quite understand that, but I want to know what your reason is for that. Is it simply a question of cost, or is it dependent on other matters such as composition and so on? Is it a question of the cost of production, or these other matters?—Well, it is not a question of the cost of production, but from experience I say that the houses which are purchasing these cheap whiskies from blenders, in regard to the whiskies that they sell, have not what you call really a good reputation.

2470. In what way?—The public get to know it very quickly. The persons who drink it who are accustomed to good whiskey think it is very vile stuff.

2471. Possibly; but I want to know in what way. Do you mean in taste or in injurious effects, or what?—Well, I personally am inclined to consider that there are injurious effects as well. I have seen cases from time to time in Ireland of persons getting into a very bad way from small quantities of whiskies—of this cheap whiskey. I believe that it is composed of either patent still, or pot still whiskey mixed, or of young pot still whiskey which has been masked with patent still whiskey.

2472. An addition of pot to the patent spirit?—Yes.

2473. That is what I wanted to bring out. You are of opinion that the patent spirit is used for the purpose of masking new or raw pot still spirit, which is injurious?—Yes. I might possibly make the point more clear. The licensed houses in Ireland may be divided into various classes. All the respectable houses, and houses which look after their trade, will buy pot still whiskey, either by name and by age direct from the distillers, or from leading firms of merchants. So far as I know, the cheap blends to which I refer are only sold to the small houses, and mainly sold for the question of price—sold very frequently at a price which you may term a reduced price. There are many traders—I will not say there are very many—but there is a certain proportion of traders who will be largely guided by price rather than by the article. Suppose, for instance, a firm of merchants are offering whiskey at 12s. a gallon, such a trader would give them an order in preference to the firm which offered him 12s. 6d. a gallon reduced.

2474. You do not think there is patent still spirit consumed as such in Ireland?—No, I do not believe so. I base my opinion on this, that it has never been offered to me, and we cover a couple of counties.

2475. Have you any knowledge of patent still spirit being drunk anywhere without being mixed with pot?—Never.

2476. Without blending with pot still?—Never, and I do not believe it is, so far as the wide area where I reside is concerned.

2477. You do not consider there are any so-called whiskies on the market which consist simply of patent still whiskies?—I refer to Ireland purely and simply, and I have never heard of any patent still whiskey or patent still spirit being sold across the counter by itself.

2478. To go back to a point in your *précis*, have you any knowledge of maize or Indian corn being used in pot stills?—No—that is only explanatory of the definition of Irish whiskey.

2479. I quite understand, but I thought it might mean that you had some knowledge that such a procedure was carried on?—No.

2480. You have no knowledge?—No.

2481. Is it your experience that there is an increase in the custom of wishing to have whiskey labelled with the name of the distillery in Ireland?—Yes, a very large increase. That has been my experience.

2482. Do you think it is at all a common practice for a man, in calling for a glass of whiskey, to ask for a particular brand?—Yes, very, very common—by persons who are prepared to pay a price. The chief prices at which whiskies are sold in Ireland across the counter are 4d. and 5d. Of course, there would be persons who would ask for a glass of whiskey at 4d., and probably be supplied with a cheap article. But then there are a great number who will call for a better article, and call for it by name.

2483. And we may take it that it is common in Ireland for there to be two prices for whiskey when it is sold across the counter by the glass?—Certainly.

2484. In public-houses?—Certainly.

2485. What is the lowest price you would say for a glass of whiskey?—It may be sold in some places at 3½d., but I believe 4d. is the lowest price—4d. is the average price.

2486. And the highest price?—Well, 5d. is also an average price. You may pay 6d., and possibly more, but it depends on the place you go to.

2487. I am talking about what one ordinarily means by across the counter?—You can get whiskey, if you want, say John Jameson 10-year-old, in some of the bigger houses in the cities and places like that—or 12-year-old—I am not sure of the age—at 6d. a glass, in any case. I ascribe that tendency to the fact that the purchasers of whiskey in bottles were keen to see that they got a proper article—a pot still article.

2488. Putting aside the question of purchasing whiskies in bottles, when it is a purchase by the glass you say it is not uncommon for a particular brand to be asked for?—It is very common.

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2489. And a higher price is sometimes paid for that?—That is rather the practice in the district where I come from.

2490. You say here that it is very desirable that steps should be taken that a pure sound article should be offered to the public? What are your reasons for thinking that the patent still whiskey, for instance, is not a sound article?—Patent still spirit by itself?

2491. Yes?—Well, personally I have not much knowledge, except to sample whiskey. I have not much knowledge of drinking whiskey, but it appears to me that with a patent still spirit, if a really good line in the way of self-drinking whiskey, there would be a very large sale for it. There is practically no sale in Ireland, so far as I know, except to the blenders as already mentioned, who buy it for the purpose of selling the compound pot still and patent still as a blend.

2492. You do not think that a mixture of pot and patent spirit should be allowed to be sold as Irish whiskey?—I do not.

2493. In any mixture at all?—No mixture at all. I think it is parallel to the case of the margarine.

2494. Lastly, you think that whiskey should be kept for three years?—I do.

2495. That is pot still?—I consider pot still whiskey should be kept for three years.

2496. Do you think patent still whiskey improves at all by keeping?—I could not offer an opinion on that point.

2497. (*Dr. Cushny.*) I should like to ask you whether you can give us any opinion with regard to the influence on public health. You say here: "It is a matter of the greatest importance in the interest of public health"?—I consider it very important in the interests of the public health, as I have already mentioned, that a pure sound article should be fixed, but, of course, I could not offer very much of an opinion as to what the standard should be. There is no doubt about it that there is plenty of deleterious whiskey being offered, whatever it is composed of.

2498. In your experience, do people get drunk sooner on patent still or on pot still?—I consider they get drunk quicker with the cheap blends which are being offered in the market. The composition of those blends is not disclosed by the blenders as a rule. In fact, I know a case in which inquiry was made, and they said they sold it by sample, not by particulars.

2499. The blend then is more intoxicating than the pot still?—I believe, speaking generally, that the cheap blended whiskey that I refer to is more intoxicating.

2500. Do you know if there is any greater craving for the patent still than for the pot still?—Well, I could not answer that question.

2501. You have not noticed that?—No. Of course, there are grades of pot still whiskey. Four-year old pot still whiskey is very different from seven-year old so far as taste is concerned; so far as mellowness and general taste are concerned.

2502. Do you think a person wants to drink more patent still than if he got pot still? Is the patent still less satisfying than the pot still?—So far as I know there is no patent still sold by itself in our country.

2503. Call it a bad blend then?—I will not say it is less satisfying. The position is this. There are many small houses in rural districts where any person who wants to take a drink of whiskey must take what is offered to him if he goes into one of these houses. The same thing applies, I suppose, to places in England. If he is able to go to what you call a leading firm, or into a substantial, respectable house, and calls for a definite brand or name, very likely he would get it. If he is out in a country district, perhaps five or six miles from a town, and he goes into a small public-house, he will very probably get one of these cheap intoxicating whiskies. Speaking of them, I believe they are more deleterious to him than if he got the other article.

2504. What I wanted to get at was what you meant by deleterious, and what evidence you had on it; but that, I understand, you cannot give us?—Well, I consider that a strong, fiery, raw whiskey is more deleterious, although I cannot say from the chemical point of view. It is more deleterious, say, than a mild old pot still whiskey of a good character, and the public consider that is so because they pay the higher price for the latter. The price is relatively very much higher.

2505. Is the blend hotter than in the pot?—These cheap blends I refer to belong, as a rule, to the fiery, raw variety.

2506. That is simply a question of newness?—Yes, very largely a question of newness.

2507. As we understand, the patent still spirit is less fiery than the new pot, as a matter of fact?—So I understand, but then the patent is blended with the pot, so as to mask it. At the same time, I do not think it conceals the fieriness completely.

2508. It is the raw pot with which it is blended which really makes the mixture hot and fiery?—Of course, it has that effect.

2509. (*Dr. Adeney.*) You have no doubt, as I have myself, heard in Ireland that an immature crude whiskey makes a drinker who consumes a little too much more violent than a good mature whiskey taken in a similar quantity would?—Yes.

2510. You have heard that said?—Yes. There is no doubt about it.

2511. You have no reason to doubt it in your experience?—I have no reason to doubt it. That is the reason why I consider all pot still whiskey should be three years in bond.

2512. You know that yourself?—Certainly; I know from testing samples of whiskey one year old, two years old, and three years old, that there is a very marked difference between the pot still whiskey of those ages.

2513. You think there is really some ground for the bad reputation, so far as effect on the consumer is concerned, which the immature, crude whiskey has?—I think that pot still whiskey matures in three years; it does not become what you call a really good drinking whiskey until it reaches the age of three years.

2514. It is not safe for potable purposes?—I will not say it is not safe for potable purposes, but it is not palatable for drinking purposes.

2515. I suppose you would not regard the ordinary man in the street as an expert on the quality of whiskey?—I think they are very well posted. A good number of them would know the difference between whiskey that would please them and strong whiskey.

2516. They would know the difference between strong whiskey, but would they really distinguish between a self pot still whiskey and blended whiskey, do you think—I mean the ordinary consumer who went in to a public-house for a glass of whiskey over the counter?—In our district, a very large quantity of the whiskey sold is the manufacture of Messrs. John Jameson & Sons, and I believe persons who are accustomed to drink their whiskies would be able to distinguish them from whiskey such as you describe.

2517. I suppose one must admit that, but suppose you are dealing with a locality that has not had that happy experience of Jameson's mature whiskey?—My experience has been, in the course of the last ten years, that good pot still whiskey in the bottle is spreading practically into almost every one of the smaller shops which used formerly not to keep it. They buy it in the bottle. We do a very large trade, as a matter of fact, in bottled whiskies bearing the name of the distiller.

2518. What I wanted to lead up to was this: Is there anything in the point which is made sometimes in Ireland that these cheap blended whiskies are really being traded upon the ordinary consumer on the reputation of the old pot still whiskey?—My experience of these whiskies is that they are largely purchased by small houses, in the first instance, by people who may not be in a very strong financial position, because the blenders will give credit in many instances on duty-paid lines, and a man who may be in a weak financial condition would be glad to get perhaps a couple of months' credit on duty-paid whiskey, and pay a long profit to the blender. They rather hope to get it. Any person, on the other hand, who is in a strong financial position, doing any sort of business, would see he was getting the right article, and would buy it in the wood from a distiller.

2519. I take it the weak financial man would be able to get rid of the inferior spirit. He would be able to sell it?—He would be able to sell it.

2520. Does he trade on the ignorance of the consumer, or does he trade against the protest of the consumer?—His customers would not be of a fixed nature. Two parties would meet together, and they may say, "Come in and have a drink," and they would go into a public-house, and it is when they have drunk the whiskey that they find out what it is, and they say, "We will not go there any more."

2521. (*Dr. Horace T. Brown.*) You have stated the retail prices for whiskey in your district as 4d. and 5d. per glass?—That is on the average.

2522. It goes down a little lower than that, but we may take it from 4d. to 5d.?—You may take it from 4d. to 5d. as the average.

2523. I suppose in that which is sold at 4d. there is a larger proportion of the patent still spirit?—Yes, whiskey which is generally sold at 4d. is very probably not called for by any special name.

2524. Would not you infer from that that the cheaper spirit is used?—Not necessarily at all. Whiskey that is sold at 4d. a glass in a good class public-house will be a whiskey that will not be a very high-class whiskey. Though possibly in some instances it may be Messrs. Jameson's, in the majority of cases it would be other pot still whiskies.

2525. I understood you to say that there were publicans who kept both kinds, to satisfy their customers?—Certainly.

2526. Which they would sell at 4d. or 5d. a glass, as the case may be?—But different whiskies.

2527. In the case of the cheaper one, that would imply, would it not, that there was a certain amount of patent spirit in it?—No; not necessarily. There is not very much patent spirit, or blended whiskey containing patent spirit, sold in our district at all.

2528. Where it is sold, is it not sold at a cheaper rate?—No; it is not. You mean the small houses, that would buy this blend of whiskies which I referred to, when they are retailing it, sell the whiskey at 4d. a glass. The only place where it might be sold at 3½d. would be in some competitive place.

2529. Do you not think that the whiskey which is sold at a lower price contains a larger proportion of patent spirit?—Not at all. As I have already mentioned, the quantity of blended spirits containing patent spirit sold in the district I come from is not by any means large.

2530. It has been stated this morning, by one of the witnesses, that the use of the patent spirit does not imply any cheapening of the product to the consumer?—I do not believe it does.

2531. I understood your prices of 4d. and 5d. were due to the fact that one was mixed with patent spirit and the other not?—Not at all.

2532. You say that is not so?—Not at all. If a person goes into a public-house and calls for a glass of whiskey—I mean in a good-class public-house—he will be offered the product, as a rule, of some well-known pot still distiller, and then he will not be charged 5d. unless he calls for it by a special name. If he says: "I want a glass of John Jameson, Three Star," then he will pay 5d. for it, and in many houses he will possibly pay the same price for the article, "One Star."

2533. You think the difference in one price goes entirely to the advantage of the dealer or the publican, and not to the advantage of the consumer?—I cannot see how that comes in.

2534. I mean this: Where a blend of patent still spirit is sold that can be bought from the merchant at a lower price, who takes the advantage of that difference?—The publican.

2535. The consumer does not get the advantage in any way?—Not the consumer, in any shape or form. It is the people who are doing the small trade, and who would want to get a substantial profit out of it, who would probably pay a lower price, in order to have a larger margin.

2536. Your mentioning two prices to the consumer led me to infer that he was obtaining the patent still product at a cheaper rate?—No, it is not a question of that.

The witness withdrew.

Mr. James Quin, called.

Mr. J. Quin.

2537. (*Mr. J. Y. Buchanan.*) You are managing director of the firm of John Quin and Co., of Limerick?—Yes.

2538. You have been over 30 years in business, I understand?—Yes.

2539. Your firm has existed for over 70 years?—Yes.

2540. You are wholesale and retail grocers and wine and spirit merchants?—Yes.

2541. Do you sell all kinds of liquors, wines, and foreign spirits, as well as home spirits?—Quite so.

2542. I suppose you supply publicans in your district with whiskey?—Yes.

2543. What is the principal demand in your district? Is it for pot still whiskey?—Well, I may say practically speaking altogether pot still, and for consumers—I may say for a period of 20 years—the public taste has been gradually going in for what I may call the very best kinds of pot still.

2544. In Limerick and all round?—In Limerick and the counties round about.

2545. Is there much spirit imported in your district—what we would call whiskey? Is much whiskey imported into Ireland from Glasgow or outside Ireland?—I do not quite follow you. Do you mean imported from Scotland?

2546. Do you handle yourself whiskey other than what is distilled in Ireland?—We do.

2547. For your Irish customers?—For our Irish customers.

2548. May I ask where that comes from?—When I say we get it from outside places I mean sometimes we get it from Scotland and sometimes we get it from ——. I presume you are alluding to patent spirit?

2549. I was going to ask you afterwards if you ascertain, when it comes from Scotland, whether it is patent spirit, or if it is Scotch pot whiskey. Do you distinguish between the two?—Of course I do.

2550. Do you import into Ireland much Scotch pot whiskey?—No, very little. We import a little, but it is only in a spasmodic sort of way. Sometimes we buy what you may call a cheap pot in Ireland from an Irish distillery, and sometimes we import a Scotch pot from Scotland, which is made, practically speaking, to resemble an Irish pot, but the trade for this is really a trade which is a very small and a steadily diminishing one. It is a trade which I do not like to encourage. I find in Ireland that the best way of improving business is to sell a good article and get a fair price for it, but we will occasionally be asked to supply an article for price generally in some mountainous district, or by the sea shore, where the persons are very far removed, I might almost say, from civilisation, or far away from the railway, and where I suppose they consider they are entitled to get a bigger profit, and on the principle that the wild country people can afford to drink a lower class of article.

2551. Then I take it the Scotch pot which is sometimes imported is cheap?—Well, it is an inferior kind of Power's or Jameson's.

2552. Is it about the same price as what you would call the inferior Irish pot?—About the same price.

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2553. Do you find it is deleterious or has the whiskey any marked effect in the way that it affects the drinker?—You are alluding to the pot?

2554. Whether it is a cheap Irish pot, or a cheap Scotch pot, do you find for instance if it is blended with a first-class Irish whiskey like Jameson ——?—We never would blend it.

2555. I do not suppose you would, but would that deteriorate it, or would it have a greater effect on the drinker?—My feeling is this, the better the whiskey the better the effect it has upon the drinker. The more wholesome it is certainly the more pleasant it is. My own feeling is that pot still whiskey is a very much healthier spirit than patent whiskey.

2556. What do you ground that on?—Well, I ground it upon, perhaps I might say, a little bit of personal experience, and also from what I hear from those around. Sometimes in Ireland, especially in the cold weather, we take what is called punch; that is, what you call toddy; that is to say you get a glass of whiskey and you put in a lump of sugar, and you add some hot water to it. I think the effect of that is to bring out the qualities of the whiskey rather more than when you use it with cold water. Anyway, the after effects are more apparent. I have tried when I was out of Ireland some whiskey which was a blend of patent and pot, and I must honestly admit I had a little bit of a head next day.

2557. You think you would not have had one if you had had first-class pot whiskey?—I am quite certain. I have tried Jameson's whiskey—I generally drink Jameson's and sometimes Power's—and I have tried the same proportion of whiskey in hot water, and I have not had a head.

2558. Can you bring it down to figures at all as to the comparative amount of patent spirit in this whiskey which would produce this deleterious effect?—I am alluding to one glass of whiskey in each case. I go upon it this way: It is a bit of personal reminiscence, I suppose you might say, but it illustrates the point. We have a club in Limerick where pot still whiskey was always used until some time ago when some whiskey was introduced which I was absolutely satisfied contained a certain proportion of patent spirit—a small proportion, I believe—with a greater mixture of Jameson's, and friends complained to me that they used to have a little bit of a head next day, and the whiskey was dropped.

2559. Do you ascribe that to the mixture of patent still in it?—I think so.

2560. Is it not the case that patent still whiskey contains fewer ingredients in addition to what we chemists know as ethylic alcohol—that is, alcohol—than in the pot still?—Of course, I am not a chemist, and you are taking me on a point upon which I find it very hard to answer you. I am quite satisfied, if you tell me so, that it is the case.

2561. In any case, if you take pure patent spirit, it has a less flavour, as you say?—Certainly. It is more neutral.

2562. That we may take it can only come from the absence of secondary products?—I should say so.

2563. And those secondary products are due to the secondary method of preparation and distillation?—I should say so.

2564. In the patent spirit, the mixture is distilled under the influence of naked steam, which cannot be higher than a well-known temperature, and it does not get the secondary products, whereas if you use a fire, there is always a certain portion of the burning which gives you empyreumatic constituents—what they call brandy burning—it is rather a burnt product, though I do not wish to throw any blame on it?—You are taking me out of my depth, I am afraid. I cannot swim in those waters.

2565. At any rate, you attribute the superiority of the pot still to these products which are not taken up in the patent still whiskey and are not found in it?—That would be my idea; but, of course, as I say, I am not an analytical chemist, and it is hardly fair to ask my opinion upon those scientific points. I would like to ask you, really more as a matter of personal opinion rather than anything else, supposing you had got pure alcohol, freshly distilled, I presume that would be, practically speaking, absolutely pure?

2566. It would depend what it was made from?—It would be, practically speaking, pure?

2567. Yes?—Would that be a good and wholesome beverage, because I certainly should not like to take it myself, and I imagine that I should not feel very comfortable after taking it?

2568. I think that is a matter more for medical opinion?—Quite so.

2569. Personally, I cannot give you that. As to the patent still whiskey, we have heard from other witnesses that it matures very much quicker, that is to say, it arrives at a state of maturity beyond which it does not improve much further?—My opinion is that patent still spirit improves very little. I think perhaps it gets a little bit mellower, rounder.

2570. As to pot still whiskey, how long would you insist on its being kept before drinking it?—I think pot still whiskey ought to be kept for three years.

2571. Three years, you say?—At least. I mean some whiskies might mature a little more than others.

2572. If you wanted to sell it in a country where the people are poor, and you wanted to give them a whiskey for the lowest price and the best quality, would you not say it would be preferable to give a mixture of pot still with patent still than immature pot still whiskey; that is to say, pot still whiskey that had not been kept long enough?—Well, I think that is a very difficult question to put. I do not think either would be good. I hardly know how to answer that question. I am only speaking from my personal experience. I have never known patent still sold by itself, but as to the mixture that you describe, well, I think it might taste more palatable; but I do not think that patent still whiskey, from my experience, is a wholesome spirit. Of course, I do not like to offer an opinion too strongly upon this point, because I am not a doctor and I am not a chemist. I am only giving you an expression of my personal opinion.

2573. In your part of the country, is there a good deal of illicit whiskey made?—I do not think so.

2574. Of course, it is not known?—I do not think so.

2575. I have heard it said that there is a great deal of very deleterious effect produced in country districts from the sophistication of legitimate whiskey with that of the illicit still?—The illicit still—that is what I should call potheen—that is spirit which has never paid any duty to the Crown.

2576. Yes, which has not paid any duty?—Not in my district. I do not believe, within my recollection, within 50 or 60 miles of Limerick, that any potheen whiskey is produced. I think very little potheen whiskey is produced in Ireland now—very, very little. There might be in some outlying western districts, like Donegal, but that is out of my range altogether. There may be some, of course, but I am not aware of any, and I do not believe there is any within my district.

2577. I suppose you will admit if you were going to blend whiskey, with a view to reducing the price, it would be less deleterious to the consumer to have patent spirit in it than potheen?—Well, my knowledge of potheen is nil, I may say; and I do not like to offer an opinion about a thing that I do not know about.

2578. You are not a distiller yourself?—No.

2579. You do not, I suppose, inquire any further about it than this. You know that pot still whiskey is made from malt and barley, but you do not make it a question, in buying your whiskey, whether there may not be oats and things of that kind used in it?—I do not. I buy, to a very large extent, upon the reputation of the distillers. In fact, a great portion of my trade consists in what you may call the best brands, which really sell themselves.

2580. You think that nothing should be sold as whiskey except what has been made in the pot still?—I am quite satisfied. First of all, I may say that 19/20ths of my customers get nothing but pot still whiskey, and the balance of my trade, in which I sell a little of this patent spirit mixed with cheap pot, is simply in outlying districts, where it is considered that anything is good enough for the people.

2581. Quite so?—The taste of the Irish people in my part of the country is increasingly difficult as

regards drinks. In England I think that you are very much better fed than we are, but in regard to our drinks we are very much more particular. As a rule I think the tea you get in some places in England is shockingly inferior, and the whiskey that is sold as Irish I do not like to say anything about.

2582. I suppose in Ireland there are plenty of people who would find 4d. a glass rather more than they could pay?—No, I should say not. I would say that the average price in Ireland would be 4d. a glass. Of course, I ought not to say Ireland, but I ought to say in the portion covered by myself—that is, the country round about Limerick. I can offer no opinion as to what takes place in the North of Ireland—I know nothing about it. But the average—in fact, almost the general price—in my neighbourhood would be 4d. If a man is a little bit what you might call a connoisseur, and wants something special, he will go and pay 5d. I should say outside the large towns, for instance, such as Limerick and Cork, and places like that, you hardly ever get a glass of whiskey at less than 4d.

2583. I suppose there is a good deal of dilution of whiskey with water before it comes to many of the consumers in the poorer districts?—Of course, to a very large extent, that is regulated by the Government. You are not allowed to reduce the whiskey below 25 under proof unless you specially tell the people that it is so, and see that it is marked on the bottle, and there are certain other regulations. So you may take it for granted that, practically speaking, the strength that is given to the public is always, say, about 18 to 20 under proof.

2584. Then the only way that a supplier of whiskey to the public has of reducing the price he has to pay for it is by using pot still of a less age, or mixing it with patent still?—I should say so.

2585. In order to have what may be called whiskey, but will not cost so much, because it has not been kept?—Yes.

2586. That is the only way?—That is the only way. You must take this into consideration. I always think that in business you want a fair amount of profit, and if you take the cost of a really good Irish whiskey, say four or five years old, and then reduce that to 20 under proof, and see how much it costs you—of course, you are only paying the duty upon the amount of alcoholic strength that goes out—you find that that can be worked out, roughly speaking, at 14s. or 15s. If you want very fine whiskey you can pay more, but you could get very good pot still whiskey with age for that. I am talking of the publican who will buy from a merchant like myself. He can work it down, I should say, to about 14s. or 15s. a gallon, and if he sells it at 4d. a glass——

2587. (*Dr. Horace T. Brown.*) What strength?—About 20 under proof. The duty upon that would be 8s. 9d.

2588. I think it is 9s. 6d. You said 20 under proof?—20 under proof, proof being 11s. A fifth of 11s. would be about 8s. 9d.

2589. (*Dr. Adeney.*) About 9s.?—No, it would be under 9s. It is rather hard to do figures in one's head, but I think it would be about 8s. 10d.

2590. (*Dr. Horace T. Brown.*) 8s. 9d.?—No; what I am alluding to is this. If a person buys from me Irish whiskey at 8s. a gallon—supposing it was four or five years old, it might run to 12 or 15 over proof; I daresay about 15 over proof—you reduce that 8s. on the same comparison from 115 to 80, and so you get it down to the standard, and then I say add 8s. 9d. duty to it, and I think it would work out at 14s. or 15s., so that the person has really no inducement, to my mind, if he gets 4d. a glass to sell anything but a good sound pot whiskey with age.

2591. (*Mr. J. Y. Buchanan.*) Do you think it would be an advisable thing to make it compulsory that all whiskey should be kept a certain time in bond?—I think so.

2592. How long do you think?—I do not think any pot still whiskey is at all mature until it is about three years old.

2593. You would make patent still whiskey be kept in bond the same time?—Of course, that is a little bit difficult for me to reply to. As I said before, I consider that patent still whiskey improves very little. When I say that patent still whiskey is neutral spirit, I would like to slightly qualify that. I think there is always a certain faint, and I think an objectionable, flavour to patent still spirit, and though that flavour gets fainter as it has been kept, and though the spirit gets rounder, I think the trail of the serpent is always over it.

2594. (*Dr. Adeney.*) I think you come from Limerick?—Yes.

2595. Have you any distilleries in Limerick?—We have one, but it is not working very satisfactorily.

2596. Is it a pot still, or a patent still, distillery?—I think it is a pot still.

2597. Has it any trade in the surrounding districts?—Very little, I think. It is owned by a Liverpool man. I think the products mostly go there—well, I do not like to say anything about it. I do not do anything with it.

2598. You do not deal with?—I do not deal with it.

2599. Do I understand you to regard all blends of pot still and patent still spirits as injurious?—I think that a patent spirit is not a good spirit. I am only offering my opinion with every deference to the Commission.

2600. I do not want to ask you anything you do not know, but with regard to the pot still ingredients, do you think that the immature crude pot still spirit would or would not be more harmful than patent still spirit?—Well, I hardly know.

2601. You do not wish to express an opinion?—I should not like to drink either.

2602. You have been referring to different classes of consumers, as to their powers of differentiating in the fineness of whiskies. I suppose a private consumer is more difficult to deal with, that is to say, he requires better spirit than some of these consumers in the outlying districts?—Not always. I have known very tiny villages some 30 or 40 miles outside Limerick in which the very finest whiskey has been sold.

2603. Probably that is the result of a very considerable experience in the past with potheen?—I do not think so. The question of potheen was sprung upon me, to my very great surprise, because I cannot ever remember any potheen still existing within any measurable distance of Limerick.

2604. I can understand that it would be hardly a district that would give encouragement to it?—It is very fine land, and I suppose we consider ourselves civilised up to a certain extent, and I think the police are very vigilant.

2605. You told us some personal experiences as to the ill effects of these blends from your personal observation. Are those observations of yours general, do you think?—I think so. In answering the question before, I tried to get out some concrete points to give you, and I think there is distinctly an objection—I suppose I might say a well-founded one—to patent still spirit in my part of the country. As I say, the tendency with us is to go in really for a very high-class type of whiskey. I will not commit myself, because it is more a sentimental point with me; personally I would like to do trade which is considered a reputable one.

2606. You have spoken of purchasing at times cheap pot whiskey. What do you mean by cheap pot whiskey?—Of course, at a price.

2607. What does cheap pot whiskey mean? Is it immature whiskey, or is it a bad flavoured matured whiskey?—To a certain extent it would not be sold as the ordinary whiskies that we would sell such as Jameson's or Power's. We hardly ever sell them except at the least four years old, but this whiskey that we mix with patent spirit would be, I should say, not more than a year and a half old.

2608. I may take it that the cheap pot is comparatively badly flavoured?—Well, it is not well flavoured.

2609. Is not that indifferent flavour masked by the blending with the patent still spirit?—Of course, we buy the pot as pot. I presume it is pot, and I believe it is pot. I believe it is made in a pot distillery.

2610. Do you blend it with patent still?—To get it cheaper still.

2611. Not to mask any ill-flavour but to get it cheaper still?—That never occurred to me as a matter

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of fact. My idea was to get it done as cheap as I could to meet a demand which was forced upon me.

2612. (*Dr. Horace T. Brown.*) You say that you supply small quantities of mixture of about half pot and half patent?—Yes.

2613. You do not invoice it as Irish whiskey, I see; but, may I ask, do you sell it as whiskey?—I think so.

2614. You would allow that term to be used for mixtures of patent spirit and pot still?—If you ask me personally I would rather not.

2615. But you do it?—But we do it.

2616. And others do it?—Others do it. That is just the point. The thing is forced upon us. We have to do as others do at a price.

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

SIXTH DAY,

Wednesday, 18th March, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. WILLIAM PHEYSEY, called.

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2617. (*Chairman.*) You are, I believe, manager of the Wine and Spirit Department of the Army and Navy Stores?—Yes.

2618. They have depôts in Victoria Street and other places?—Yes.

2619. Your turnover in that department is very considerable, I believe?—Very large indeed.

2620. I believe you have had personal experience of the wine and spirit trade yourself, and your family before you, for a great many years?—Yes, myself for 45 years.

2621. Will you tell the Commission in what form your stores deal in whiskies: is it in cask or in bottle, or how is it?—We sell in bottle, in jar, and in cask.

2622. I suppose your sale is mainly to subscribers, members of the Army and Navy Stores?—Yes, almost entirely.

2623. That has a wide area?—We have 80,000 members of all classes.

2624. You sell, I believe, both Scotch and Irish whiskey?—Yes.

2625. Of course, there is a well-defined difference to you between Scotch and Irish?—Yes.

2626. Which is your greater trade in?—In Scotch.

2627. Has there been any change at all in the relative proportions of the two quantities?—Yes, the sale of Scotch whiskey has increased, and the Irish whiskey has decreased.

2628. I will deal first with Irish whiskey. What, in your view, is Irish whiskey, and what is it that Irish whiskey ought to be?—My opinion is that Irish whiskey should be distilled in a pot still from mixed grains according to the formula of each distiller. Each distiller has his particular recipe or formula upon which depends his style.

2629. You say according to the formula. Does formula mean the proportion of ingredients?—It means the proportion of malt and other mixed grains.

2630. First of all you say it must be made in a pot still?—Yes.

2631. Are you catholic enough to permit of any blending?—For myself and my own business I do not, but I do not see that there is anything wrong in selling a blend with other spirit, always provided that you acquaint your customer with the fact that he is receiving a mixture, and what that blend is. It should be stated on the label and also on the invoice.

2632. I suppose you would say that the blend must come within certain conditions as to proportion?—I should say so certainly.

2633. You have spoken of your forty years' experience. Has the distinction between pot still and patent still been known to you during those years?—Yes.

2634. During the whole of them?—Yes.

2635. Do you admit into your traffic at the Stores any patent still product?—Quite recently, since this discussion came up between the pot still and the patent still, I made an essay as to whether the public or the consumer really would take the blend that we had made.

2636. First of all, will you deal with pure patent still. Have you had pure patent still unmixed and unblended for sale?—No.

2637. What you are speaking of is a blend?—Yes.

2638. Will you be good enough to give us the result? First, what it was you attempted to sell, and what it was you succeeded in selling?—We attempted to sell this blend of grain and malt because we were told pretty emphatically everywhere that the public demanded it, and so to prove the fact to my satisfaction I made this blend. I described it on the label, and the result has been an absolute failure as regards business. I do not think we have sold equal to much more than three-quarters of a butt of either of them since we put them on the list six months ago.

2639. Will you give it to me, if you can, in bottles, or dozens?—That would be about 430 odd bottles.

2640. They were different kinds of blends?—Yes, two.

2641. Over what period did that extend?—Six months.

2642. Were you offering it to the public during the whole of those six months?—Yes.

2643. You say about 430 bottles?—About 434 bottles.

2644. Of both quantities?—Yes. We tried a Cambus which was extensively advertised, and people came to

us and asked for it, and we obtained it whenever it was asked for without saying anything to prevent persons exercising their own judgment, and we sold in the same period equal to 24 bottles only.

2645. What does the Cambus represent to you and the public?—Plain spirit.

2646. A blend?—No, plain grain spirit.

2647. Plain patent still?—Yes.

2648. How much do you say you sold of the Cambus?—24 bottles.

2649. When you were selling this what did you contrast it with? Were you contrasting it against your sale of what you call pure Irish whiskey?—Yes.

2650. How did you let the public know that you had got the Cambus?—I am speaking of Scotch whiskey only.

2651. I asked you whether you contrasted it with your Irish whiskey?—No.

2652. You did not introduce this product into your Irish sales at all?—No, not at all.

2653. Do you know whether there is any patent still whiskey known in the Irish whiskey trade and sold as such, either blended or pure?—I have never seen any.

2654. You do not know of it?—Personally I do not know of it.

2655. You have never had any demand for it?—No.

2656. Now you told me this was sold as a Scotch blend?—Yes.

2657. What application was made to you for it? How did you let the public know that you had got it?—We issued it in our circular, first of all, and we have continued the advertisement in the little lists.

2658. I see you have headed it quite plainly: "Whiskey. Scotch malt and grain blend"?—Yes.

2659. "Average price per gallon, 17s. 6d." How does that compare with pure pot still whiskey in price?—In price it is cheaper.

2660. How much?—I have not made that calculation.

2661. Can you give me your price list?—Yes (*handing list*).

2662. I see in this list: "Scotch special blend, pure malt only." That is cheaper. That is 16s. 6d. Does that depend upon its age?—Yes.

2663. The average age of the 17s. 6d. is nine years?—Yes.

2664. That makes all the difference?—Yes.

2665. Then there is "Pure malt, 9 years, very old." That, I see, is 20s. a gallon?—You can compare the malt and the grain blends. "A," average age 9 years, is 38s.

2666. I was taking the gallon?—17s. 6d., as against No. 4, very old, which we sell at 20s. Those are practically the same ages.

2667. What do you say occasions the difference in price between the 17s. 6d. and the 20s.?—The cost of the grain spirit is cheaper.

2668. Do you blend, or do you buy it blended?—We do buy plain old grain.

2669. And then blend?—Yes, and then we blend ourselves in the proper proportions, as stated on the label.

2670. Would it be asking too much if I asked you to tell us what were the proportions of this which is listed at 17s. 6d. a gallon?—The proportion is 65 per cent. of spirit made in a pot still from malted barley, and 35 per cent. of spirit made in a patent still from grain.

2671. If that is so, there is nearly two-thirds to one-third?—Yes.

2672. The difference in price must be very considerable to create the difference of 2s. 6d.?—Yes, it is.

2673. You have only the one-third to make the saving on?—Yes. I may mention another thing, that although we describe No. 4 as only nine years, it is practically nearer 11 years, but we always wish to be on the right side, and that is really nearer 11 years than nine years.

2674. Among the things that you have handed in there is a little kind of ticket which is headed "Scotch whiskey" in large letters?—Yes.

2675. Then you have your marks, and then you proceed: "This bottle contains a blend of malt and grain whiskies made in Scotland in the proportion of 65 per cent. of spirit made in a pot still from malted barley, and 35 per cent. of spirit made in a patent still from grain. Average age 8 years. Strength approximately 15 under proof. Six bottles to the gallon," and so forth. There is no question arising in your mind as to the right to call this blend "Scotch whiskey"?—No.

2676. Is this the only proportion of blend that you have made or have you tried any other proportion?—Yes, in "B" there is a proportion of 70 per cent. of spirit made in a pot still from malted barley, and 30 per cent. of spirit made in a patent still from grain, and the average age is 12 years. The difference is in the age of 12 years.

2677. You made a slight difference in what you call the ticket between the 65 per cent. and the 70 per cent.?—Yes.

2678. Did you, before making this blend, and making this experiment to the public take any advice as to what would make a sound whiskey fit for your institution to issue to the public?—I simply made it up with the intention of competing with the well-known proprietary articles.

2679. What do you mean by that?—By proprietary articles I mean such as Buchanan's, Dewar's, Walker's, and these well advertised brands.

2680. Had you heard that that Scotch whiskey had met with complaints?—Yes.

2681. Then you entered into competition?—Yes, as a test.

2682. I suppose these firms were known firms?—Yes.

2683. They were successful with particular blends?—Yes.

2684. How was it that you came to fail?—I cannot tell you.

2685. Do those firms that you have mentioned trade in the English market?—Yes.

2686. In the same market that you do?—Yes, and we sell them when asked for.

2687. That is in the quantities that you have mentioned?—No, we sell these proprietary articles.

2688. As blended?—Yes.

2689. Do you sell them as agents?—Yes.

2690. Why do they not appear in your list?—Because we make it a plan not to list more proprietary articles than is absolutely necessary.

2691. If you are selling the proprietary articles that are blended more or less like your experimental article it now becomes important to see how the public will take them. It is the same article. How much do they take of it from you?—They take of Buchanan about 400 cases a year.

2692. What is a case?—Two dozen.

2693. Is Buchanan's the largest?—Yes.

2694. Of course there are, like Glen Livet and Spey Side, pure pot still whiskies sold in the market. Is a comparatively large portion of this what you call proprietary whiskey sold as Scotch whiskey?—In England, yes, a very large portion.

2695. As you sell this you must have some practical power of testing it. What do you say as to this whiskey that you are selling, both the proprietary whiskies and those on which you made the experiments? Do you think it is a fit article to place before the public?—Certainly.

2696. Is it detrimental in any way to health?—No.

2697. Of course it is pure. It is not adulterated in the sense of the word "adulteration"?—No.

2698. What should you say would be the effect on the consumer of this article as compared with the pure pot still?—That, my Lord, I would rather not say anything about, because I do not profess to have any knowledge on that subject, and I must leave it more to medical men to speak on that matter.

2699. Did you ever hear of any complaints of any purchasers of your experimental quantities?—No, no complaint whatever.

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2700. We have heard it said that there is a craving for more. Is there any special mode of distinction between the two that you could give us without going into detail?—I think myself from what I have seen and heard with regard to the blended mixture of the patent and pot that people can drink more with apparent immunity of the blended article than they could of the pot still whiskey.

2701. Is that because it is not so strong?—No, the pot still has the defects of its qualities. The pot still itself, unless it is well matured, is very likely to upset the stomach.

2702. It is higher flavoured?—Yes, it is very much higher flavoured, and it contains all the so-called impurities, which develop in time into quality. A person drinking, we will say, three glasses of pot still whiskey might possibly complain next morning that his stomach was a little bit upset, but if he took a blend of the plain spirit with it, the pot still, of course, has been so much diluted with alcohol that the effect upon his nervous system is not so apparent, but it may be later on.

2703. Then on which side do you say the balance is?—I say the pot still.

2704. Why? He is upset by the pot still?—He is upset, certainly, if he takes too much.

2705. But taking equal quantities?—He would not feel it so much; in other words, that man could get intoxicated on plain spirit, and it is doubtful whether at the moment it would affect him so much as the pot still.

2706. In the Stores, I suppose, you sell it in bottles?—Yes.

2707. Is it generally one bottle, or in quantities?—One, two or three bottles.

2708. From what you know of the habits of your customers, and so forth, do you think that the bulk of them do know the difference between pot still and patent still?—Yes.

2709. You think so?—Yes, the sales of our pot still whiskies are enormous.

2710. I know, but supposing, taking an ordinary customer who comes in and asks for whiskey, you say, "Will you have a pot still or a blend with patent?" what would that convey to the ordinary customer, do you think?—I think he would say he would take the unblended.

2711. Until lately has there been much discussion, do you think, by the ordinary public, as to the difference between pot still and patent still?—No, I think before the Islington prosecutions there was very little discussion about it. Of course, people in the trade were rather wondering how far it was to be allowed to go, but beyond that, amongst the members of the public themselves, I do not think there was much discussion.

2712. Of course, there were certain persons who must have known of the Committee of 1891, when there was a very long discussion on this particular point. Of course, you must mingle with your customers, and what I want to know from you is this, do the public know the difference between the pot still and patent still whiskies?—No.

2713. If they came in to you, and you yourself had an interview with anybody on the subject, and said to them, "Will you take a gallon of whiskey blended at 17s. 6d., or will you have pot still pure at 20s., both of the same age?" what would guide them to a decision?—I think the fact that it was pot still.

2714. Do you not think the difference between 17s. 6d. and 20s. would guide them?—No.

2715. It may be that they would think the cheaper article was an inferior article?—Our experience is that the better articles sell better.

2716. The better the article, the better the price?—Yes, in a very much larger proportion.

2717. Of course, if the same person could afford it he would rather take a dear wine than a cheap wine?—Yes, but the tendency is, in wines and spirits, for people to take the more valuable and better article. That is our experience.

2718. I have got from you your practice and the price. Of course, customers who come to you at the Stores would be persons of a certain position who would not contest the question of a very small difference in price?—No, not at all. We have very poor customers. We have people in all classes of life from, we will say, the sergeant or corporal to the colonel. We have all classes who come to us, poor and rich, and I think I may say that the bulk of our people are not rich people.

2719. Do you supply publicans at all?—Only in one case, and that is in the country, where we supply a house which is run by an officer on his own estate. We supply him with goods, and we also supply the Union Jack Club and places like that. Those are the only places that we supply.

2720. Then you would know nothing as to the further retailing, if it were sold in a public house, as to how the charges are made there for the different grains?—No.

2721. If you do sell this blend, I gather from what you have told us and shown to us that you do feel it necessary to inform the purchaser of what he is buying?—Certainly, I fancy that is the reason why he does not buy it.

2722. If a purchaser comes to you, is it your practice to make your officials give these little labels or tickets that we have here into the hands of the customer so that he can make his choice? I suppose when you were making your experiment you did that?—No, but books are left on the tables in the office and the salesman is consulted. He has explicit orders on no account to try and deceive people in the slightest way, but he is to give all information as truthfully as he possibly can, and it being on the bottles as well as in the price list, there is no possible chance of the consumer being deceived.

2723. I quite appreciate that. You put the price list on the tables and let the person who is purchasing consult them?—Yes; anyone can pick one up.

2724. For a time at least this sale of yours of the blend was experimental?—Yes.

2725. And so far as your customers are concerned that blend must have been a novelty to them?—Yes.

2726. Did you find you had any complaints from them? Did they come back and make any complaints as to what they had been purchasing?—No, none.

2727. But they did not purchase much more?—No.

2728. Was there any reason given for that?—None whatever.

2729. What do you think was the reason?—I think the reason is that they were told so plainly what the blend was. Of course, ordinary proprietary whiskies always contain a proportion of patent still, and they acknowledge that it is a blend of patent still and malt, but it does not convey anything to the consumer, and he thinks that he has got Scotch whiskey.

2730. If you took, say, a blend with 65 per cent. of pot still in it and tasted that by the side of your pot still, is the difference in flavour very marked?—Yes, there is a difference in the body more especially. Plain spirit lightens it if I may so term it—it lightens the heavier pot still, and it is thinner on the tongue. It is thinner in the glass when mixed with soda water or water. It is what some distillers call harder. It is not soft and it has no body. If you have a malt whiskey and you taste it new there is an oiliness on the tongue which experts call body, and you have the same in wine. You have that same oiliness in good wine, but if you blend it with spirit, with plain spirit especially, you thin it and you take away that body.

2731. May this be a matter of taste so that one man may prefer it, or do you believe that the whole balance goes in favour of the pot still?—I should say, speaking from experience, it is decidedly in favour of the pot still, judging from the result of our business.

2732. You have spoken of these proprietary sales. Those distillers must find that the blend is acceptable to their customers?—Yes, there is no doubt that to the ordinary consumer when he asks in a public-house for a "Black and White," or a "Dewar," or any of these well-known proprietary articles he gets a better article than he would from an ordinary publican, and therefore he drinks that for preference.

2733. Would you say that the proprietary article, the blend, is a better article in the ordinary public-house?—Generally it is.

2734. If you had got the pure article?—Yes.

2735. Sometimes a pure article gets adulterated, does it not?—I think the pure article if they could afford to give the price for it would be the one most sought after.

2736. I do not see why it is you say that a person in an ordinary public house asks for a "Black and White" and gets a better article. It is better than what?—Better than the article supplied by the publican himself. He has his ordinary whiskey which he may buy from anybody in the market.

2737. What would that be?—A blend of pot still and patent spirit.

2738. But it is all blended?—Yes.

2739. Of course a publican would sell that which he could get the best price for, and apparently he goes in for the blend?—Yes.

2740. Why?—I could not tell you, but he gets more profit by the blended stuff. That is his main object.

2741. And he gets sufficient consumption?—Yes, he gets sufficient consumption because he supplies nothing else.

2742. If he could make more and get a better consumption of pure pot still he would do it, I suppose?—He certainly would if the pot still were cheap enough. It is quite a question of price.

2743. I am not suggesting for a moment that it is done, but supposing a publican wished to get the flavour of the pot still, could he use a certain quantity of water with it without losing the flavour of the pot still?—Yes, he could dilute it very much.

2744. That, of course, is a dangerous thing for him to do?—Yes, because he runs the risk of his customer complaining about the whiskey not being strong enough; and, of course, it dilutes the flavour very much.

2745. And under certain legal restrictions he must not sell whiskey and water?—No, not without stating it. He is bound to state it on the label if he sells below a certain strength.

2746. You would give full information to the purchaser as to the blend?—Most certainly.

2747. Even to the extent of the percentage of the two blends?—Yes.

2748. 65 per cent. of pot still and 35 per cent. of patent still?—Yes.

2749. That you think necessary before you would allow it to take place?—Yes.

2750. The distiller can do it as he sends it out in cask?—Yes.

2751. And besides that the authorities may help him?—Yes.

2752. It then has to go to the publican, when, I suppose, it is often in cask still?—Yes.

2753. There is no difficulty there?—No.

2754. The publican, if he sells in bottles, can put it on the bottle, as you do here?—Yes.

2755. If he sells across the counter, what is to be done then?—That is the difficulty, how to inform the customer of the strength, but he can sell it as a blend if his customer asks the question, and he could have it branded on the cask.

2756. But the customer does not see the cask. My question is this: A customer goes in and says to the publican, "Give me a glass of Scotch whiskey," or "A glass of whiskey," and then the publican says, "I have this which, according to the Army and Navy Stores, is entitled to be called Scotch whiskey, and this is a blend." What does he tell the customer? He gives him what you call Scotch whiskey; need he tell the customer any more?—Not unless the information is required. I do not see how he could impress it on the customer.

2757. Very few customers would ask, "What is the nature of the blend?"—Very few.

2758. Would you impose an obligation on the publican to give the details, and to say to the customer, "I am giving you Scotch whiskey, but it is blended?"—He might put the ordinary notice in his bar, or upon the vessel from which he draws the spirit—he might put the announcement so that anyone who went in there could see it and read it; but that is one of the difficulties.

2759. It would be almost impossible for him to trust to the barman or barmaid to give such information, and there would be the difficulty. You would be disposed to rely on a well-framed and well-displayed notice?—Yes, certainly; it would be safer for the publican to do so, and it would be right that he should. He is doing his best to inform his customer, and he cannot do more.

2760. Now I want to ask you a question with regard to the keeping of the whiskey in bond, that is with reference to the age of the whiskey. We heard that the pot still whiskey is benefited a great deal by being kept a certain time undrunk?—Yes.

2761. Do you know whether that would apply to patent still whiskey?—The patent still whiskey acquires flavour from the cask and from the previous contents of the cask, but I am afraid that is about all that it does get.

2762. I am asking about the effluxion of time?—I do not think it makes any difference, or very little difference to the patent still product.

2763. But it does to the pot still?—Yes. There is nothing to develop in the patent still.

2764. Would you make any minimum period of bondage for the pot still?—Yes.

2765. What number of years?—Certainly not less than two years, and longer if possible.

2766. Do you think it is better as regards the health of the consumer that it should be not so much a raw spirit but that it should be a kept spirit?—I think so.

2767. You would make it not less than two years, but what would you wish to have if you could that is consistent with the outlay of capital?—I should make it three years, but that would necessitate a great outlay of capital on the part of the person who has to keep it that time, but it should certainly not be less than two years, and three years if it could be arranged.

2768. If you would do that where it is efficacious with regard to pot still whiskey are you going to let, according to your view, the patent still whiskey be subjected to the same period, or would you let that go free because it is no use whatever to it?—Patent still does improve to a certain extent, it gets a flavour from the cask which is generally a sherry cask, it extracts a certain amount of flavour from the cask and from the oak, and in that respect it is certainly better to keep it a little longer, but as spirit I do not think it improves. I have here a sample of 16 years old grain spirit, which I will show you, which has been in a glass all the time. (*Sample produced and handed to the Commissioners.*) That you will see is unchanged and is perfectly clear.

2769. Has this been in wood all this time?—No, if it had been in wood it would have changed.

2770. What is this to convey to my mind?—The unimproving qualities of plain spirit when you keep it away from the wood and the previous contents of the cask.

2771. Is this the result of it being for 16 years in the glass?—Yes.

2772. Supposing this had been in this glass only six months, how different would that have been?—No different. It does not change. It does not develop anything.

2773. This is the pure grain?—Yes.

2774. What would the pot still develop?—It would get colour, it would change colour, from the developing of the light or from the impurities, in the bottle.

2775. (*Mr. Guillemard.*) That would be so in bottle?—Yes.

2776. Not so much as in wood?—No, because the pot still itself takes on colour from the wood.

2777. But still it would alter considerably?—Yes, the light.

2778. (*Chairman.*) Is there any change in flavour?—None.

2779. That is the pure grain?—Yes.

2780. (*Mr. Guillemard.*) I want to ask you a question with regard to what you call the proprietary blends. Have you got information as to the amount of those sorts of blends that you sell, as distinguished from your "A" and "B"—I mean Buchanan's and those others that you mentioned?—It is a very small proportion.

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2781. It is a very small proportion compared to your very big turnover?—Yes; we sell between 700 and 800 butts of 55 dozen each in a year of malt whiskey. It is about in the proportion of 1 to 100.

2782. Those blends, Buchanan's and the others, are not listed in your price list?—No.

2783. You gave us the reason?—Yes.

2784. That is a reason of your own?—Yes.

2785. Consequently, nobody really comes to you for those blends unless they happen to suit their particular taste, and they have had them before and want them again?—We tell people we will get anything they like to ask for, but we take no responsibility, and so in that way we get business.

2786. I gathered you do not want to guide your customers' taste, but do you not think that your list possibly does guide them a little? There are a very great many people who take up a list, and say: "I shall go to the Stores, because I shall get very good whiskey there. Let me have a list of what they have for sale." Do you think that if people saw Buchanan's and those others in your list, that that would have much effect on the amount you would sell of them?—I do not think so.

2787. You do not think that when people ask for whiskey they are really guided by your list, which they take to be the result of your experience?—I think not, because we had a very fine trade in malt whiskey before Buchanan's were started, and it was developed mainly on lines that I started from the very first day that I was at the Stores 24 years ago.

2788. There is one small point that I want to question you upon. I am not sure that I understood the answer you gave with regard to what the publican sells. I rather gathered from your evidence that you are of opinion that all the ordinary publican would sell would be blends—better or worse blends, but he would not sell pure pot still?—That is so.

2789. Do you think that is pretty generally the case with regard to publicans?—I should say so.

2790. You suggest the reason is that there is more profit to them on a sale of the cheaper article at the same price?—Much more profit.

2791. They do not differentiate in price?—No.

2792. (*Mr. J. Y. Buchanan.*) I want to ask you one question about the blends which we have heard of under the name of "A" and "B." Do you think that if an ordinary customer had two bottles, one containing, say Buchanan's, and the other, one of the two blends you have produced here, he would know the difference?—Yes.

2793. I mean between Buchanan's blended whiskey and either of your two?—Yes.

2794. Then you would say as to the ordinary customer it is not that he has been supplied simply with the whiskey the composition of which he has been told, but that he is not supplied with whiskey with a definite name?—Yes.

2795. You think that is the reason that he does not come back?—Yes, he is guided by the name mostly.

2796. (*Dr. Adeney.*) You spoke of the injurious effect upon the consumer of pot still whiskey if taken in too large a quantity. Did you refer then to perfectly matured pot still whiskey or to immatured?—Both will upset the stomach.

2797. It is a difference of degree?—Yes, it is a difference of degree. In whiskey, like wine, you have a meridian, and sometimes old Scotch whiskey will become very oily and rather bilious stuff.

2798. That upsetting of the stomach is of a transitory nature?—Yes.

2799. And not likely to be permanent, as I think you indicated the effect of the patent still or alcohol might be?—Yes. I can say, without encroaching on the medical point of view of it, that if continued the alcohol would be decidedly worse for the nerves than the pot still—the pot still would be a warning to the man.

2800. But besides this transitory injury do you think that new pot still whiskey would have any other injurious effect as against matured pot still spirit?—It might affect the head a little.

2801. We are told that in Ireland new pot still spirit has a maddening effect on the drinker?—I think there is very little doubt about it.

2802. So that there would be some other injury to health induced by new pot still spirit?—Yes, it is decidedly necessary to mature it.

2803. In good proprietary blends is care taken to employ matured pot still?—We hope so.

2804. Would the consumer be affected at all if matured pot still whiskey were not employed, leaving flavour out of account?—He might be if new spirit was used.

2805. What I want to come to is this. Is there a danger of the reputation of these good proprietary blends being taken advantage of for the sale of blends containing either immature pot still whiskey or very small proportions of matured pot still whiskey and being sold to the poorer classes of consumers?—Decidedly, that is the mischief. That is where it all comes in and where it is so necessary to state the proportions, because you may have a blend say of one Scotch whiskey which is 95 per cent. of patent still, or anything you like to use, and only 5 per cent. of pot still.

2806. Do I understand from you that amongst consumers there is really an ignorance as to these different classes of pot still spirits and blends?—With the ordinary consumer, yes, there is ignorance.

2807. And he is really guided by the reputation of the old genuine pot still spirits?—Entirely, because he gets a suspicion of the flavour, and he thinks it is all right.

2808. So that these blends have the advantage of trading on the reputation of the old pot still?—Decidedly. It is the strong flavoured whiskey that is most in demand. Our American cousins are very fond of buying Islay whiskey because they can mix it with common maize spirit, and it is sold as Scotch whiskey. Islay whiskey has a very strong flavour. The peat that is employed in the drying of the malt gives a very strong flavour indeed to the grain, and that comes out in the distillation. The Americans bought very large quantities of Islay whiskey specially to mix with their plain spirit, and they sell the result of that as Scotch whiskey. They trade upon the flavour of Islay whiskey.

2809. (*Dr. Horace T. Brown.*) I am not quite clear about your attitude with respect to blends. Are you of the opinion that blends of malt and patent spirit may be legitimately sold as Scotch or Irish whiskey?—I am very glad you have asked me the question because you have given me the opportunity of explaining the position I take up in this matter. I call it Scotch whiskey because the name has been used, and has been applied to patent still spirit made in Scotland. It has been applied for so many years that the term is sanctified by the old usage, but I do not consider that patent still spirit is whiskey. But what would you call it?

2810. But still that, blended with pot still whiskey, you would call Scotch or Irish whiskey?—It is called Scotch or Irish whiskey, but it is only for that reason.

2811. The question of whether it is to be called Scotch or Irish whiskey does not depend in any way upon the constituents of the blend being declared? Whether blended Scotch whiskey is declared as blend or not does not affect the question of whether it is Scotch or not?—No. If the patent still grain is made in Scotland it has a right to be called Scotch patent spirit or Scotch whiskey.

2812. Would you make any limit whatever with regard to the blending of patent still spirit with pot still spirit? Is there any point at which it would cease to be Scotch whiskey?—It is very desirable that the proportions should be stated.

2813. I think your definition requires a little alteration if you admit that blends may be called Scotch. You say Scotch whiskey should be distilled in a pot still from malted barley alone?—That is the correct Scotch whiskey.

2814. I am trying to harmonise these two statements?—I know the difficulty is great. The question was put to me when I was in the box at Islington, and it is difficult, as I expressed it then. What would you call it? It has been known for 40 or 50 years as Scotch whiskey.

2815. You know there are some that would even deny the name of whiskey to such a blend?—Yes, there are a great number of people, but speaking for myself, my own opinion is that it should not be

called so, but that is my own opinion, and I do not care to set myself up as being the only person who has a right to lay that law down, it having been known as Scotch whiskey for so many years.

2816. You have produced a label here on which you have described your blend, and you call it Scotch whiskey?—Yes.

2817. I want to know whether it would be equally legitimate to call that Scotch whiskey without this statement of what the constituents are?—I say no.

2818. Do you think that makes all the difference?—Yes, I think that makes all the difference. If I tell my customer what it is, I have done my duty.

2819. But does it change the nature of the spirit in such a way that you can call one Scotch and the other not?—No, it does not.

2820. The mere fact of declaration does not alter the fact that it is Scotch whiskey or not Scotch whiskey?—As I tell you, I suppose by right of user it is Scotch whiskey, but my explanation on the ticket and in my book tells my customer exactly what he gets. That is my case, that all blends ought to have that description and information for the use of the public.

2821. That is scarcely the point. The question is as to whether such a declaration would entitle something which without that declaration was not a Scotch whiskey to the designation of Scotch whiskey?—I think the Commission is sitting to decide whether we can call it Scotch whiskey or not.

2822. I am merely trying to find out what the opinion of the trade is?—My opinion is that it is Scotch whiskey, and I am simply making use of that announcement here, that it is Scotch whiskey with the sanction of, and usage by, the trade; but I go further, and explain the constituent parts there, so that the consumer is not deceived in any way.

2823. I think you said that the public does not care very much about the difference between pot still and patent still, as regards the materials which are used. The purchaser does not know anything about it?—He knows practically nothing about it.

2824. But is not the same thing true with regard to the difference between Irish and Scotch? Do you think, for instance, that the man in the street knows that Irish whiskey is generally prepared with a certain amount of unmalted grain?—No, I do not think he does.

2825. And he does not trouble himself about it?—No, he goes by the difference in the flavour alone.

2826. You mentioned Cambus, did you not?—Yes.

2827. Do you regard that as a Scotch whiskey? You do not, do you?—Only, as I tell you, by the right of user and by common custom of the trade it has been called Scotch whiskey.

2828. For a great length of time?—Yes.

2829. Would you consider it a hardship to deprive it of that term?—Well, it would be decidedly a hardship.

2830. Is that a spirit which improves with age at all in plain wood?—Very well, I should say.

2831. Do you attribute the whole difference of cost and the whole difference of flavour to the sherry cask?—Yes, to the sherry cask, or whatever the contents of the cask were before the whiskey was put in.

2832. Do you know if Cambus improves in value in plain wood?—Yes, naturally.

2833. And there is something else which improves with it?—Yes, the interest, the cost of keeping it.

2834. But as regards the public, are they willing to give more for Cambus 6, 7 or 8 years old, than for new Cambus?—Yes.

2835. There is something in it which improves?—Yes, the flavour of it improves by being kept in wood; it may improve in flavour but it derives that flavour from the contents of the cask.

2836. But I am speaking of plain wood?—Yes, it would derive it from the oak. It is the same with brandy, if you put brandy in an oak cask. Some manipulators of brandy put oak shavings in the cask too, because it gets the wood flavour and it develops. There is certainly a change if you keep it in wood.

2837. You have told us that in your opinion pot still whiskey is a more satisfying drink than patent still?—Yes.

2838. Inasmuch as it would bear a much larger dilution with water?—Yes.

2839. Is not that an argument in favour of the consumer selecting the most highly flavoured whiskies that can be procured, such as Islays and Campbeltowns?—Yes, but they are so highly flavoured that unless a man has been brought up on them and has known them all his life he does not care for them. The sale is very small as a straight whiskey.

2840. Unless they are blended?—Yes, and it is the same with Highland malts, they are too strong in flavour to be sold by themselves, they are not palatable.

2841. Do you think there is a tendency on the part of the public to go in for a less highly flavoured whiskey?—Yes.

2842. That which is made by blends in many cases?—Yes, both of the pot stills and of the patent stills. The aim is to get it as even and as well balanced as you can.

2843. Can you tell us whether your views coincide very much with those in the trade, or whether they are in any sense peculiar to yourself?—I think there are a great number of people in the trade who agree with me. I think so from conversation.

2844. I ask you because I see you have called yourself a heretic or eccentric when giving evidence before Mr. Fordham?—Yes, when I gave evidence before Mr. Fordham I was a heretic in this way that I did not say that patent still spirit was a deleterious article. I am not prepared to say that it is a deleterious article at all, because if people like to frolic with grain spirit at all I let them.

2845. (*Dr. Bradford.*) I understood you to say that it was possible that some blends of whiskey might be rather deleterious, that they might be harmful?—Yes.

2846. Do you attribute that to the grain spirit or do you attribute that to the blend having been made with raw pot still spirit?—Could you guide me in any way as to the context of my remark with regard to that? It might be deleterious through some spirit, which is neither grain nor malt, being put into it, or it might be deleterious if there is new pot still whiskey blended with a plain spirit. That might be because of its newness and its undeveloped impurities.

2847. Might I ask you what other sort of spirit might be used other than grain or malt spirit?—I have heard, but as to these things I do not wish to speak merely from hearsay, and for that reason, if I might advance my view on the matter, I think it is so necessary that the Excise should help us in clearing up these matters and not permit the mixture of any what I might call foreign spirit, not necessarily a spirit made abroad, but a spirit foreign to grain or malt spirit, such as molasses or potato spirit, or the use of essences.

2848. (*Chairman.*) What do you say as to maize?—Maize would be a plain grain spirit.

2849. (*Dr. Bradford.*) So that if there were any deleterious action from a blended spirit it is not necessarily due to the admixture with grain spirit?—No.

2850. That is the point I wanted to get at.

2850*a*. (*Dr. Adeney.*) You spoke of some of the Highland malts as being too highly flavoured for ordinary consumption?—Yes.

2851. That does not apply to all malt whiskies?—No.

2852. As a matter of fact, there are several malt whiskies that are quite light in flavour when properly matured?—Yes, and that is where the art of the blender comes in, and makes it almost necessary that Scotch whiskey, to be really palatable and nice, should be blended, but it should be blended with malt whiskey of the different makes—the different artists, you may say, who created the compound.

2853. But there are a large number of consumers who prefer self whiskey; that is, pot still whiskey that has been called unblended?—There are not many. I have introduced two, and it is not general. They are very good whiskies—what I might call unmarked in their characters. There is a character

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in them, but it is not strong enough to be repugnant, and some Highland malt whiskies are repugnant in flavour.

2854. Does that obtain with Irish pot still whiskies?—To a much lesser degree; their characteristics are not so marked, but then they are carried on simply in ordinary large distilleries like the Lowland malts or Campbeltowns—not so much of the different districts.

2855. With regard to this sample of patent still spirit that you have shown us, I quite admit the fact that it has not become coloured, and it proves that it is very pure as alcohol?—Yes.

2856. May we take it as an average sample of patent still spirit, in your opinion?—It is rather unpatriotic to say so, but it is a German spirit. I have a business which I also have the direction of, as well as the wine department. I have a large manufactory to look after as well as the wine department, and we buy a large quantity of German spirit for perfumery purposes. It is a very delicate and very fine spirit.

2857. It is a rectified spirit?—Yes, a very highly rectified spirit, and it is so absorbent of any odour that you cannot allow anybody who has been working in the perfumery department to go near it if you want to get a pure sample. You must not let him go near the tap. I had an example the other day, when I wished to get a sample spirit to show to the Commission. I sent my clerk into the place where this was kept in a copper drum, and he drew it off very carefully. I would not let any workmen go near it, but he happened to draw this off in the room where they had been mixing a very delicate perfume. The bottle was sent up to my office, where we were experimenting and making Scotch whiskies with essence—with this very spirit which I have here, and when we came to smell the result, the delicate flavour of White Rose had been acquired by this sample being drawn off in this room, so that the spirit takes to itself all these things.

2858. Was that a sample of the patent still spirit, or of pot still?—No, that was a very highly rectified grade spirit. I have not got a sample here.

2859. You do not know of your own experience whether a patent still spirit made from grains would discolour by exposure to the light?—No, I do not think so if it is made as clean as most of them are.

2860. (*Mr. J. Y. Buchanan.*) There is one question I want to put to you which is suggested by what you said about patent spirit, that you would not think it was at all deleterious and that there would be no harm in people indulging in it as they thought fit. I would like to ask you if you would consider that the public welfare would be prejudiced if the trade in potable spirits were left to the action of the ordinary law of supply and demand and without further legislative interference?—I think legislative interference is highly desirable.

The witness withdrew.

Sir H. Plunkett.

The Right Honourable Sir Horace Plunkett, K.C.V.O., F.R.S., called.

2861. (*Chairman.*) You are an Irishman by birth?—Yes.

2862. Have you for the last 20 years been actively engaged in the promotion of agriculture in Ireland?—Yes.

2863. For eight years, if I remember aright, you were a member of the House of Commons?—Yes, from 1892 to 1900.

2864. I suppose your knowledge of whiskey is simply a general knowledge?—Certainly, only general.

2865. You are not in any way connected with distillers?—No, and I am not a heavy drinker.

2866. What is your opinion as to Irish whiskey? From your general knowledge is it a pot still whiskey?—Yes, that always has been my idea.

2867. Your interest is in support of the view that the materials that are used should as far as possible in relation to Irish whiskey be of Irish growth?—Yes, I am concerned to see that Irish farmers, and, indeed, other farmers, are not unfairly competed with through the sale of manufactured articles the raw materials of which people imagine to be produced by farmers and are not.

2868. Of course, according to you, where the competition must come in in respect of the Irish whiskey is by establishing the fact that Irish whiskey is composed of certain articles which are grown by the Irish farmer or ought to be?—It is so generally believed to be.

2869. And you say ought to be?—Yes, and ought to be.

2870. That is, of course, coming to barley at once; malted barley?—Yes.

2871. To follow that up, it is a general principle that the purchaser, the consumer, is to have that which he expects to have, and that which he asks for?—Yes.

2872. Having that as your view, how do you apply that to this question of Irish whiskey?—I do not regard the matter so much from the point of view of the consumer as from the point of view of the producer. Of course, I am like all the rest of us here, a consumer; and I do think that the consumers ought to be protected from what I regard as fraud in many cases, but I am much more interested in the agricultural community and I object to this particular misdescription of Irish whiskey because it would have a very grave economic effect upon Irish agriculture at an extremely important crisis in the affairs of that country. It is that view which I particularly wish to put before the Commission, because I think that the consumers' interest will be far better represented by other witnesses.

2873. Will you deal with it practically please? What is the competition you wish to shut out as against what I will call your Irish whiskey?—I wish to prevent consumers of whiskey imagining that they are purchasing whiskey manufactured out of Irish materials in Ireland when they are purchasing something else.

2874. I quite understand that, but practically where does the competition come in? You have spoken of articles. Are you speaking of maize and rye?—Chiefly maize.

2875. You want to have it that Irish whiskey, or that which is sold as such, should have for its ingredients malt and barley?—Yes.

2876. In that way the growth of barley in Ireland would be maintained as it is, or would be greater?—It would probably be greater. It happens to be one of the crops we grow best, and if anything were done to discourage Irish barley growers it would have serious effects on the whole agricultural economy of Ireland. I may say that while I was in the Department of Agriculture all my advisers were agreed that we ought to pay special attention to what we call the industrial crops, the most important being barley and flax. We conducted a large number of experiments in the cultivation of barley all over Ireland in conjunction with Guinness's Brewery and some of the distilleries. We kept a special expert to deal with that crop alone, and these experiments are still being continued. This action was not taken in the interest of the whiskey trade, but it so happened that this crop had a very important bearing upon the whole of our agricultural economy, and it would have very disastrous results if anything were done at a time when it is most important to increase the area under tillage if the lands that are now growing barley were largely to go back to grass.

2877. Is it your opinion that of late years there has been any falling off in the growth of barley or in the quantity of barley used for making whiskey?—Not of late years, but I attribute that very largely to the steps which have been taken to promote barley grow-

ing by educating the barley grower. A great deal has thus been done to stimulate the production.

2878. What becomes of his barley?—It is all bought in the country.

2879. For whiskey?—Yes, and still more for stout. A great deal more for stout than for whiskey.

2880. For liquor?—Yes.

2881. You are very anxious that nothing should be done in the way of trade, or carrying out the details of trade, which would stop the growth of barley in Ireland?—Yes. I only say that if anything was done that would stop the growth of barley in Ireland it would have far more serious consequences probably than the Commission are aware of, and I say that with full knowledge after a very long study of the subject, and a very practical connection with Irish agriculture.

2882. (*Dr. Horace T. Brown.*) Do you know if there is any importation of grain other than maize into Ireland for the purpose of distillation?—Not much I think for the purpose of distillation.

2883. You do not import any of the Mediterranean or Black Sea barley?—There is a considerable importation, I believe, of barley. The statistics are all published, and the amount can be ascertained accurately.

2884. Your opinion is that it is the patent distiller who is the offender, not the pot distiller?—Yes. I do not call him the offender. I have no objection to patent stills provided the user of them does not invade the old Irish whiskey trade. As long as everybody knows what they are purchasing I have no objection. I do not want to put any restrictions upon the production of patent spirit. Of course, it would be useless to recommend that.

2885. I quite understand your point of view. It is totally different from that of the distillers.

The witness withdrew.

Colonel Nugent T. Everard, called.

2886. (*Mr. Guillemard.*) I believe you are a Colonel in His Majesty's Army?—Yes, retired.

2887. And you are Lieutenant for the County of Meath?—Yes.

2888. I gather from your *précis* of evidence that you have no interest in any distillery of any sort?—None whatever.

2889. Or in any form of trade that is connected with whiskey or any spirit of any sort?—No.

2890. Did you hear Sir Horace Plunkett's evidence just now?—Yes.

2891. I gather from your *précis* that your object is to give evidence on the same lines, is it not?—Precisely.

2892. You speak just as a consumer of whiskey and as interested in agriculture?—Not so much as a consumer, but as noticing the effect upon agriculture of the lessening demand for barley, or what would probably be the effect of the introduction of patent spirit—less demand and a lower price. I may mention that I am a member of the Board of Agriculture of Ireland and Chairman of the County Committee of Agriculture, besides being on the Council of the Royal Dublin Society, so that I look at the matter more from the agricultural point of view, and its effect on the agriculture of Ireland.

2893. The Commission gathered from Sir Horace Plunkett that the growth of barley in Ireland a short time back showed indications of falling off, but that that falling off had been arrested by the efforts of the Board of Agriculture and better education on the subject. Do you agree with that?—I do; and also by the efforts made by the Royal Dublin Society. They are giving very large prizes for the best samples of barley in the different counties. I think that has done a very great deal of good.

2894. The point you wish to urge is that you would deprecate the Commission making any recommendation that would tend to increase the sale of spirit produced, say, from maize, or something like that, to the displacement of what you would call genuine Irish whiskey?—Precisely. What I object to is what I think is the encouragement of a fraud. I cannot see that there is any difference in principle between the treatment of food products and drink products. Margarine has the colour and flavour of butter, but it is a fraud to call it butter, and it is not even allowed to be called butterine. It is the same with silent spirit; it can be made to imitate whiskey, but I consider it a fraud—of course, it is only my individual opinion—to call it whiskey.

2895. I am not a chemist, but is the case of whiskey an exact parallel to the case of margarine and butter? The two things called whiskey which the Commission are asked to distinguish between are more nearly produced from a kindred thing than butter and margarine?—I should not say so. Margarine is produced from the internal fat of animals, and butter is produced from the fat of milk.

2896. (*Dr. Bradford.*) With reference to the use of barley, is the bulk of the barley that is used in the process of making whiskey grown in Ireland?—I believe the greater quantity of it is. I know there is a considerable amount imported, but still I am speaking of the grain from which it is produced being barley which is largely grown by Irish farmers.

2897. I did not know whether you could give us any information as to the relative proportions?—I am afraid I could not give you any statistics, but they are all published.

2898. (*Dr. Adeney.*) I gather you do not wish in any way to restrict the production of patent still spirits?—Not at all if they call it silent spirit, or some other name, but not whiskey.

2899. If it is not sold on the reputation of pot still spirit?—If it is called Irish whiskey I consider that it is a fraud upon the public.

2900. And to that extent you think the Irish farmer or the British farmer is entitled to protection?—Most decidedly. You have only to go to the smallest inn in Ireland and they would repudiate with scorn using any blend whatever. They will probably profess that it is real Jameson or something like that, but they would never admit that it was a blended spirit—not in my neighbourhood.

2901. Have you formed in your own mind any way by which a pot still spirit could be protected by name?—I should think by confining the name Irish whiskey to pot still whiskey.

2902. You would not allow the term "whiskey" to grain spirit?—No, certainly not.

The witness withdrew.

Mr. William Purser Geoghegan, called.

2903. (*Dr. Adeney.*) You reside at Rockfield, Blackrock, County Dublin?—Yes, near Dublin.

2904. You are a member of the Congested Districts Board?—Yes.

2905. And you are a Director of the Great Southern and Western Railway?—Yes.

2906. You were formerly chief brewer to Messrs. A. Guinness and Co.?—Yes, I was for 38 years.

2907. You have resided for the most of your life in Ireland?—Yes.

2908. What do you mean by the term "Irish Whiskey"?—I take it to mean that it is distilled in a pot still from the produce of Irish grain, or such materials as can be grown in Ireland. I believe the pot still distilleries in Dublin use a certain amount of English grain occasionally.

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2909. You mean by "Irish grain" barley?—Yes; Irish grain, chiefly barley; and they also use a blend of oats and rye, I believe.

2910. Have you had any opportunities of seeing distilleries in Dublin?—Yes, I have often been in Power's and Jameson's distilleries.

2911. Have you had an opportunity of judging of the quality of the materials employed in those distilleries?—Yes, I have had an opportunity of judging of the materials. I have frequently co-operated in the question of seed. We all buy in the same market—all the chief brewers and distillers of Dublin buy in the same market, and they are competitors for the best quality of barley.

2912. You can confirm the statements that have been made that the Irish distillers buy the best materials that can be obtained?—Yes, and use the greatest care in their treatment of them.

2913. You think that Irish pot still whiskey should be protected from competition with patent still spirit, when that patent still spirit is sold as pot still spirit?—Certainly.

2914. Or if it is sold in a manner suggesting that it is pot still spirit?—Yes.

2915. You think that the sale of patent still spirit as Irish pot still whiskey would be not only injurious to the trade itself, but would have an injurious economic influence on the agricultural interests of the country?—Certainly; if the patent still encroached on the trade to the detriment of the pot still, it would have that effect. It would be to the prejudice of agriculture in Ireland if the patent still spirit is sold as whiskey instead of its being known, as it is, as a mixture of either a blend or product of imported maize.

2916. So, in connection with the pot still industry there are really two industries to consider, namely, the farming interest and the distillers' interest?—Yes, but I am speaking from the point of view of the farmers' interest.

2917. Would you think it right to give the name of "Whiskey" to patent still spirit?—I do not think it ought to be called Irish whiskey.

2918. But you allow it to be called "Whiskey"?—No, I would rather it were not called "Whiskey."

(*Dr. Horace T. Brown.*) It might be called "Grain Whiskey."

2919. (*Dr. Adeney.*) You do not think that spirit made from maize has any right to be called "Irish Whiskey"?—No, I do not.

2920. But you would like "Grain Whiskey"?—Yes.

2921. As far as you know in Ireland, the flavour of pot still whiskey is preferred to that of patent?—Certainly in Dublin and in the South of Ireland. I am not so well acquainted with the North of Ireland, and I do not know what the feeling of people there is.

2922. But there can be little doubt that the great mass of consumers prefer pot still whiskey?—Yes, I have no doubt of it, as far as my part of Ireland is concerned.

2923. Have you any knowledge of the English tastes?—I know there is a prejudice against Irish whiskey in England because they do not easily get it good.

2924. You mean to say that the Irish whiskey that has been given to them has been of an inferior quality?—I believe what is sold to them as Irish whiskey is often what is made in Belfast from maize.

2925. And in that way the Irish pot still whiskey is safer in reputation?—Certainly in England. That is my opinion.

2926. You have told us you do not know what is the taste in Belfast?—No, I do not, so far as the ordinary consumer is concerned.

2927. (*Mr. J. Y. Buchanan.*) You do not think that patent still spirit should be called "whiskey." Supposing in patent stills in Ireland they were to use Irish barley in the preparation of the spirit, and that was used for blending with the pot still in Ireland, would you permit that to be called Irish whiskey?—No, I do not think so; but that is not done, I believe, so far as I know.

The witness withdrew.

Sir W. Goff.

Sir William Goff, called.

2928. (*Dr. Bradford.*) You reside at "Glenville," Waterford?—Yes.

2929. You are Chairman of Messrs. Davis, Strangman and Company, Limited, of Waterford?—Yes.

2930. You are Chairman of the Waterford Steamship Company?—Yes.

2931. You have been connected with Messrs. Davis, Strangman and Company since 1863?—Yes.

2932. You have resided the whole of that time in Waterford?—Yes.

2933. You are not directly interested in whiskey?—No, I am not in any way interested in the trade.

2934. What is the point of view from which you wish to give evidence?—As a brewer I believe it to be extremely important that a proper market for barley should be maintained in the country. Latterly there has not been so large a growth of barley in Ireland, owing, I believe, to distillers not purchasing as much barley as they used to, and I believe that the introduction of patent still spirit displaces the growth of so much barley in Ireland.

2935. Is the supply of barley in Ireland sufficient for the needs of all distillers?—At times it is; some years it is, and some years it is not. If a short crop comes then it is absolutely necessary occasionally to import barley, but that does not often happen. I speak as a brewer.

2936. As a rule sufficient barley is produced in the country?—Yes.

2937. It is rather exceptional for it to be imported to any large extent?—I only speak from my own knowledge.

2938. You speak as a brewer?—Yes.

2939. Do you think the same thing holds in distilleries?—Yes.

2940. Would you tell us what your definition of Irish whiskey is?—My definition of Irish whiskey is pot still whiskey made chiefly from barley and entirely from Irish grain.

2941. You mean by Irish grain, grain grown in the country?—Yes.

2942. Actually grown in the country?—Yes.

2943. So that you would not call whiskey Irish whiskey if it was made from imported barley?—Yes, certainly at times it is absolutely necessary for a distiller to use foreign barley.

2944. I gather you would not allow the term "whiskey" to be applied to patent still spirit?—No, certainly not.

2945. The term "whiskey" has been applied to it?—It has.

2946. It has been so called?—Yes, it has been the custom of the trade.

2947. Would you allow the term to be applied if barley were used in a patent still?—I believe the product of a patent still is almost pure spirits of wine. I do not think it ought to be called whiskey at all.

2948. Not even if made from barley?—Not even if made from barley.

2949. Then you would be satisfied if these different products were labelled?—I think that the Excise who have the control of the manufacture of whiskey up to the time that it is sold and leaves bond ought in some way to protect the public by allowing the purchaser to know, when he is buying the whiskey, exactly what the whiskey is made from, and I think the public ought to be in that way protected.

2950. But that would be met by a label on the bottle for example?—That would be met by a classification of the whiskey.

2951. Such as what?—Such as "Whiskey made from three-fourths barley and" —— whatever other grain the distiller might use.

2952. You think that the proportions of the mash ought to be recorded?—Yes, I think the proportions of the mash ought to be kept, and that there ought to be in that way some guarantee to the public, when purchasing whiskey, what kind of whiskey they are purchasing.

2953. (*Dr. Horace T. Brown.*) I am not quite clear, Sir William, on this point. You would advocate that a declaration of that kind should always be made on the bottle whether the contents proceeded from malt and unmalted grain, or whether they in part proceeded from the patent still. Would you advocate in all cases a label explaining the origin of it?—I am not in the trade, and therefore I cannot say what a trade person ought to do.

The witness withdrew.

Alderman W. F. Cotton, called.

2954. (*Mr. J. Y. Buchanan.*) You reside at "Hollywood," Dundrum, County Dublin?—Yes.

2955. You are an Alderman of the City of Dublin?—Yes.

2956. A Justice of the Peace for the County of Dublin, and Deputy-Lieutenant?—Yes.

2957. You are also a Director of the Hibernian Bank, and one of the Directors of the Dublin United Tramways, and Chairman of the Alliance and Dublin Consumers Gas Company?—Yes.

2958. You are an Irishman by birth?—I am.

2959. And you have lived in Ireland all your life?—I have.

2960. You have no interest in any whiskey distillery?—Not the slightest, in any way.

2961. What is the particular point that you wish to give evidence upon?—It would be on the question of whiskey made in a pot still. Irish whiskey is made from malt, the other portions of barley, and sometimes they use a small percentage of oats. I have, on one or two occasions, tested patent still whiskey, and, so far as I am concerned, I could not drink it, I would not drink it, and I refuse to drink it.

2962. Is it your opinion that the name whiskey should be limited to Irish whiskey made in a pot still?—Yes.

2963. Without any mixture whatever?—Yes, without any mixture whatever. I would not allow blending, if it was possible—not at all.

2964. Not even one of pot still whiskey with another?—I would not mind that so much, but that is a different thing.

2965. But you would not allow it to be blended with patent still, even made in Ireland?—No, I would not.

2966. And, of course, I suppose it is the custom in Dublin and other parts of Ireland to use the name of whiskey for most blends?—I think it is.

2967. Would you think it a great public inconvenience if the use of the term Irish whiskey for liquor that contained anything but pot still were prohibited?—I do not think so. There is plenty of whiskey made in the country that is pot still.

2968. But I mean the use of the name by the people?—The use of the name I do not think would make any difference; people are beginning to understand now what pot still whiskey is, and they are beginning to understand the nature of it.

2969. They would get a different article of consumption, and use the same name for it?—I do not think it would make the slightest difference. Speaking about the age of whiskey, I heard some evidence given about the age, and I would be very sorry to drink whiskey that was under the age of three years old. Jameson's say that their whiskey is fit to drink at five years old, but I should be very sorry to drink any that was of less age than that.

2970. Would you make it necessary for them to keep the whiskey at least five years in bond?—I should say that ought to be the very least—five years. Of course it is an expense to keep it for five years, and it makes the whiskey more expensive.

2971. Would you be inclined to make that legislatively necessary?—I would be inclined to do so. There is no difficulty in getting it. It costs more money, and as far as I am concerned, I am drinking in my house at present John Jameson's 20 years in bond.

2972. That could not be expected to be consumed by an ordinary consumer?—No.

2973. With regard to ordinary people who buy whiskey in a public-house, how long should that be kept?—I should say five years.

2974. Would not that make the price rather excessive?—It would make it more expensive.

2975. A man who pays 4d. a glass for whiskey would not be able to buy it for that?—Yes, but they would drink less of it, and that might not do them any harm.

2976. Do you think any restriction should be put on the materials used by the distiller in his grain?—I think as long as they use malt and barley and a percentage of oats from time to time the whiskey would be all right. That is my experience.

2977. Would you want any declaration as to the process of manufacture?—Yes, decidedly. I think that is the great failing, that you can buy whiskey and in very few cases can you get the age of the whiskey or the material that it is made of.

2978. Or the process?—Yes.

2979. You would make them declare that?—Yes, I think it would be a great advantage to the people in Ireland, at all events, if it was made so.

2980. A minimum of three years you think is necessary?—Yes, three years I say should be the minimum time.

2981. You think that these opinions you have given us are participated in by your friends that you come in contact with in Dublin?—Yes, that is the general impression.

2982. (*Dr. Adeney.*) You say you would not yourself drink young whiskey, or Jameson's whiskey so young?—Or any whiskey.

2983. What is your reason for that?—Because in the first place it is too strong. I think it injurious to the constitution to drink whiskey under three years old. I believe it must be injurious. That is my opinion.

2984. Have you any specific data?—Only the effect that it would have on myself if I drank it.

2985. You have tried it?—Yes, I have tried it often.

2986. You find the unpleasant experience you had from young whiskey you do not get from the matured whiskey?—That is so. I may tell you, some 14 or 15 years since I had an interest in a distillery, Rowes' Distillery, of Dublin, where I had an opportuity of tasting whiskey at all ages.

The witness withdrew.

Mr. R. Downes.

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Mr. ROBERT DOWNES, called.

2987. (*Dr. Adeney.*) You are chairman of the Westmeath County Council?—Yes.

2988. And you are a member of the Board of Agriculture?—Yes.

2989. You are a farmer?—Yes.

2990. And you reside at Russellstown, Mullingar, Westmeath?—Yes.

2991. You have resided in Westmeath all your life?—Yes.

2992. Have you any interest in any distillery?—No, none whatever.

2993. Are you a grower of barley yourself?—No.

2994. What do you regard as understood by the term "whiskey" in Ireland?—The ordinary meaning I have always understood of "whiskey" was material made in a pot still from home-grown barley.

2995. As an Irishman resident in your country you can say that that is the general opinion amongst Irishmen?—There is no doubt whatever that that is the usual opinion of the ordinary man in the street.

2996. And of the man in the country too?—Of course that is what I mean.

2997. You will admit that Irishmen have had good means of becoming educated to it?—We have that reputation at all events.

2998. They have gained this reputation from the illicit distilling of former times, I believe?—Yes, and I believe an Irishman's idea of whiskey is somewhat the potheen in a more skilful form of manufacture.

2999. When an Irishman asks for a glass of whiskey he certainly does not expect to get patent still plain spirit?—I do not think so, and very few people know of it in Ireland.

3000. It is not known in your part of the country?—Not the expression "Patent Still Whiskey" until this last few months, almost when this inquiry was instituted. Until then I do not think the word was even known.

3001. So that a customer going into a public-house in your part of the country if he asked for a glass of whiskey would expect to get the ordinary Irish pot still whiskey?—Yes, but he does not always get it, although he expects to get it.

3002. Does he know whether he does or not?—That is according to the class of person that has it.

3003. There are some people who would not know?—I think the vast majority would not know.

3004. Do you say that patent still whiskey is being sold to them on the reputation of the pot still whiskey?—Yes, I believe that. I may say that I look at this matter entirely from the same point of view as Sir Horace Plunkett and Colonel Everard. I am a member of the Board of Agriculture, and as a farmer I take an interest in this question. Any interest I take in this matter at all is on the question of tillage in Ireland.

3005. You are not interested in the interest of the distiller?—No.

3006. But in the economic effect of the distilling industry upon the agriculture of the country?—Yes.

3007. If the pot still whiskey has unfairly to compete with grain spirit, that unfairly affects the interest of the farmer or agricultural interest of the country?—Naturally it reduces the demand for barley and in that way reflects on the prosperity of the country from the tillage point of view.

3008. So that the barley farmer requires protection in that particular?—He would be very glad to have it.

3009. Is the growth of barley in your part of the country diminishing?—My county is not a barley-growing county except at one end of it—it is more a grazing county.

3010. Do you know anything of the growth of barley in the country generally?—No, not much, except what has come under my notice as a member of the Board of Agriculture.

3011. Can you give us any opinion from that knowledge?—The only information I can give is that barley growers have been complaining. I have seen constantly notices of meetings complaining of the bad prices they are receiving for barley.

3012. Is that a question of inferior quality or a lessening demand?—Well, as far as I can understand, the growth of barley in Ireland would practically disappear but for the demand created by Guinness's Brewery; or at least it would seriously diminish; and I believe it is the common belief in Ireland that whiskey, or what is called whiskey, made from other ingredients than home-grown grain has militated against the growth of barley in Ireland. That is the common belief.

3013. I suppose, as a member of the Board of Agriculture, you are interested in the experiment which Sir Horace Plunkett referred to?—Yes.

3014. To improve the quality of the barley?—Yes.

3015. You are of the same opinion that the whiskey of pot still distilleries would have a considerable influence upon that?—Yes, I am.

3016. Is it to the interest of the farmer to take up the cultivation of the superior qualities of barley?—I am quite sure it would have that effect. I quite agree with all the remarks of Colonel Everard and Sir Horace Plunkett with regard to that matter.

The witness withdrew.

Mr. J. F Nannetti

Mr. JOSEPH PATRICK NANNETTI, M.P., J.P., called.

3017. (*Mr. Guillemard.*) I believe you are Member of Parliament for the College Green Division of Dublin?—Yes.

3018. I think we all know that for some two years you occupied the position of Lord Mayor of Dublin?—Yes.

3019. You are an ex-President of the Trades Council of Dublin?—Yes.

3020. Which has kept you in touch with the trading classes in Dublin?—Yes, and working-men generally.

3021. Could you give the Commission the benefit of your experience as to what you would consider Irish whiskey to be?—I consider when I, taking myself as a member of the general public, ask for a glass of Irish whiskey, that we are getting a whiskey that has been distilled from barley, malted or unmalted, from grain grown in the country.

3022. I quite understand that when you ask for that you know exactly what you are asking for?—Yes, I know exactly what I am asking for, but I do not know what I am getting.

3023. But when you get down to a less educated man—the man in the street, I might say—do you think he has the same opinion in his mind of what Irish whiskey is, and that he is asking for the same thing?—I believe when a man asks in Ireland, and even when we come to London and ask for a glass of Irish whiskey, we expect to get whiskey distilled from barley malted or unmalted, as I said before, and I think that the effect of not getting what we expect we are getting has been the means of diminishing that demand for Irish whiskey which, I am sorry to hear, witnesses say is on the decrease here.

3024. That view you think is prevalent with Irishmen?—Yes, that view is prevalent.

3025. The ordinary Irishman, if he knew that he was getting a drink that was composed wholly or partly of patent still spirit, would not accept it at all as Irish whiskey?—I would consider he was being imposed upon.

3026. Why would that be, do you think? Do you wish to bring in the question of health or do you think it would simply be that he was getting something that he did not like and did not want?—I take a glass of whiskey now and again. I look on a glass of Irish whiskey as wholesome, and I think if I was taking or drinking patent still whiskey, which

I have tasted, I would think I was not getting as wholesome an article.

3027. You have not tried a course of experiments with the patent still spirit on yourself?—No, I have not.

3028. Was it only one experiment?—One experiment.

3029. What did you risk yourself with? What was the spirit?—A patent spirit. It was told to me that it had been produced in one of those patent machines.

3030. Did you know the age?—No, I did not.

3031. Or the materials?—No, further than that I was told it was made from maize.

3032. Did it taste of anything to you?—It had not the taste of what I was used to, but perhaps I have acquired a taste for a certain brand of whiskey. It had not the flavour to me of what I was used to when I drank a glass of Powers' or a glass of Jameson's.

3033. Your views would be those, you think, of the people of Ireland generally?—I think so, and I think the people of England too. I have lived enough here in England going backwards and forwards, and I have focussed the view. If I could focus the opinion of Englishmen here when they get a glass of Power's whiskey, which I very often bring across here in my bag, they would tell me that was different stuff to what they got in England, and they like it the better. It is more palatable, I take it.

Mr. J. P. Nannetti.

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3034. (*Chairman.*) It is something that you think it is safe to let English people drink?—I have been into public-houses here and when I have asked for a glass of whiskey I have not got anything like it.

3035. What did they give you in the House of Commons?—There we generally ask for "Baby Powers," and we know what we are getting.

3036. You have no grievance on that subject to complain of—the size of the bottle?—We get what we ask for—a glass or a half-glass, full if we want it.

The witness withdrew

Adjourned for a short time.

Mr. Frank Litherland Teed, called.

Mr. F. L. Teed.

3037. (*Dr. Horace T. Brown.*) We are only proposing this afternoon to take you through your proof. It is rather a long document, and we have not had it in our hands sufficiently long to study it as carefully as it deserves. I will therefore take you as minutely as possible through your proof so as to get everything on the notes. You are, I believe, a Doctor of Science of the University of London?—Yes.

3038. Also Public Analyst for the Borough of Islington and for the City of London, and the Borough of Camberwell?—That is so.

3039. You are an analytical and consulting chemist in practice, and you have been in practice for a very considerable time?—That is so.

3040. You are also, I believe, a barrister of the Middle Temple?—That is so.

3041. In 1904 I believe you were requested by the Islington Borough Council to investigate the subject of whiskey?—Yes.

3042. You studied that question for many months?—That is so.

3043. I believe, also, in the course of your enquiries you visited both Scotland and Ireland?—That is so; I was twice in Scotland and once in Ireland.

3044. So that you have inspected both pot and patent stills in action?—That is so.

3045. Will you kindly state what the problems were which were put before you by the Islington Borough Council?—The first question was to ascertain whether the terms "Scotch Whiskey" and "Irish Whiskey" could be defined, and whether those terms belonged exclusively to pot still products. The second problem was: supposing they could be defined, whether it was possible to distinguish them analytically—I mean distinguish them analytically from patent still spirits.

3046. You enquired, I suppose, from persons connected with the trade?—That is so.

3047. Members of the public?—Yes.

3048. Who were unconnected with the trade?—Who were unconnected with the trade.

3049. I suppose you read various papers and literature dealing with the subject?—That is so.

3050. Including the report of the Select Committee of the House of Commons in 1890-91?—Yes.

3051. And a certain article on spirits in the Encyclopædia Britannica?—Yes.

3052. That article, I suppose, is the one in volume 32?—Yes, that is so.

3053. You remember the date of that. It is 1902, I think?—I think it is 1902—yes, 1902.

3054. It is one of the supplementary volumes?—It is one of the supplementary volumes.

3055. You quote here a number of extracts from the poems of Robert Burns, which you state bear out certain points, showing that the Scotch drink was distilled from barley and was known as whiskey?—Yes. I have the volume of Burns here if you would like to check my quotations.

3056. I think we may take them for granted. Perhaps you will kindly recite them, or read them?—Is there a Scotchman present?

3057. Well, I cannot do justice to them, so will you kindly read them?—Not being a Scotchman I will read them as well as I am able.

3058. (*Chairman.*) What is the point of them?—There is one poem on the subject "Scotch drink," and in that poem there are many references to barley and to stills, and to the word "whisky."

3059. It really is relevant to what we are discussing?—I believe so. I considered it so.

3060. Then will you read them?—

"Let other poets raise a fracas,
'Bout vines, an' wines, an' drucken *Bacchus*,
An' crabbit names an' stories wrack us,
An' grate our lug.
I sing the juice *Scots bear* can mak us,
In glass or jug."

Would you like the whole of the poem?

3061. (*Dr. Horace T. Brown.*) No, please call attention to the point as it occurs.—What I desire to call attention to is that in the first verse he uses the phrase "Scots bear," which I am informed means Scotch barley. Then in the second there is:—

"O thou, my Muse! guid auld *Scotch drink*,
Whether thro' wimpling worms thou jink,
Or, richly brown, ream o'er the brink,
In glorious faem."

I desire to call attention to the term "Scotch drink," and the expression "wimpling worms," which means twisting, or meandering, worms, and no doubt refers to the worm of the distillery, because otherwise it has no meaning. Then the third verse:—

"Let husky Wheat the haughs adorn,
An' Aits set up their awnie horn,
An' Pease an' Beans, at e'en or morn,
Perfume the plain.
Leeze me on thee, *John Barleycorn*,
Thou king o' grain!"

I desire to call attention to the expression, "John Barleycorn," in the verse.

3062. (*Mr. Guillemard.*) Is that whiskey or beer?—It is both, because in the second verse you will see he refers to the two, or two different varieties of drink from barley. The words "wimpling worms" refer, I think, to whiskey. The next line is:—

"Or, richly brown, ream o'er the brink."

That undoubtedly refers to beer. Then I should like to refer to the 17th verse:—

"Out owre a glass o' *whisky punch*
Wi' honest men."

Mr. F. L. Teed.

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There the term "whisky" first comes in in this poem. In the 18th verse there is:—

"O whisky! soul o' plays and pranks!"

That is whiskey once more. Then the 20th verse:—

"Thae curst horse-leeches o' th' Excise
Wha mak the *Whisky stells* their prize!"

In the 21st verse:—

"Fortune! if thou'll but gie me still
Hale breeks, a scone an' *Whisky gill*."

The term "whisky" is what I wish to emphasise there.

3063. (*Dr. Horace T. Brown.*) You are of opinion that the whole of those quotations, taken together, show that Scotch drink was distilled from barley, and was known as "whiskey"?—That is so.

3064. And that the stills must have been pot stills, because no others were known at that day?—Yes.

3065. (*Chairman.*) What is the date of the poem?—I do not know the date of the poem, but this book is published in 1798. There is a preface, dated 1787. It is "a new edition considerably enlarged." I have not the first edition.

3066. (*Dr. Horace T. Brown.*) You think you have evidence that barley was malted before being used, and you can bring evidence from the ballad of "John Barleycorn"?—Yes, in the same edition. The volume is also dated 1798, and verse 7 contains a more or less allegorical description of "John Barleycorn":—

"There was three kings into the east,
Three kings both great and high;
An' they hae sworn a solemn oath
John Barleycorn should die."

It proceeds to show you how they buried him in the ground. Then in verse 7 the harvest is described:—

"They've ta'en a weapon, long and sharp,
An' cut him by the knee;
Then ty'd him fast upon a cart,
Like a rogue for forgerie."

That is the harvest obviously. Then in verse 8:—

"They laid him down upon his back,
An' cudgell'd him full sore.
They hung him up before the storm,
An' turned him o'er an' o'er."

That undoubtedly refers to the threshing and winnowing. In verses 9 and 10 and 11 there is the malting:—

"They filled up a darksome pit
With water to the brim;
They heaved in John Barleycorn,
There let him sink or swim.

They laid him out upon the floor,
To work him farther woe;
An' still, as signs of life appear'd,
They toss'd him to and fro."

It is a very accurate description of malting.

"They wasted, o'er a scorching flame,
The marrow of his bones;
But a miller used him worst of all—
For he crush'd him between two stones."

The grinding of the malt is there described. In verse 12 it is indicated that an intoxicating drink was the result:—

"An' they hae ta'en his very heart's blood,
An' drank it round an' round,
An' still the more an' more they drank,
Their joy did more abound."

That is all I can get from that poem.

3067. You maintain that all the witnesses before the Select Committee stated—or, at all events, no witness denied, that the word "whiskey" was applicable to the spirit from the pot still?—That is so.

3068. You have not come across any evidence to show you when, if ever, the term "whiskey" was permitted to be applied to the patent still product?—No.

3069. But you state that the why is only too obvious?—That is so, the cheapness thereof.

3070. Then you bring forward that, of the witnesses before the Select Committee, the following, among others, took the view that whiskey must be a pot still product?—Yes.

3071. The first name being Sir Algernon West, the Chairman of the Board of Inland Revenue?—That is right.

3072. Then Mr. Molyneux, Chief Inspector in the Excise?—Yes.

3073. Then Dr. Bell, Principal of the Inland Revenue Laboratory?—Yes.

3074. Mr. Cobden Samuel, Principal Analyst, Custom House?—Yes.

3075. Mr. A. H. Allen, Consulting and Analytical Chemist?—Yes, I have quoted the questions which I more particularly rely on. Would you like me to read those to you?

3076. Is that necessary?—I can find them here.

3077. You have given the references, so we can find them for ourselves?—Yes, if you have a copy of this.

3078. We will do that. You state that the views of the pot still distillers might be regarded as biassed. I suppose that is the views of the pot still distillers being members of the Select Committee?—No, I mean the witnesses.

3079. I beg your pardon?—The witnesses who happen to be pot still distillers.

3080. You have not quoted those?—No.

3081. You regard them as biassed?—No, I do not regard them as biassed, but I thought they might be regarded as biassed. Personally, I do not regard them as biassed.

3082. Then you give us some quotations from the article on spirits which you have already referred to in the 1902 Encyclopædia Britannica, which was written by Dr. Schidrowitz?—Yes.

3083. You say that Dr. Schidrowitz, in this article, used the term "whiskey" as synonymous with British pot still spirits?—Yes.

3084. And you give certain references?—Yes.

3085. And that he also makes a distinction between grain, or silent spirit, on the one hand, and whiskey on the other?—Yes. Would you like the quotation?

3086. You state that the whole article is worth reading, and then you give certain quotations from it which you consider material to the inquiry?—Yes.

3087. Perhaps you will kindly read them to us?—At page 806, second column on the top line, I will only quote a few words so as to show that he used the term "silent" as equivalent to "grain": "but in grain (patent or 'silent' spirit) distilleries." I am not referring to anything beyond that there. Then page 806, second column, line 9: "with regard to the apparatus, the old form of pot still employed in the manufacture of malt whiskey in Scotland and Ireland, and of brandy in France, has undergone little change, as it is generally recognised that for the preparation of this class of spirits, which depend for their characteristic flavours on the retention of a considerable proportion of the volatile bye-products of the wash, the simplest type of still is the best." I quote that also partly to show that there has been no great change in the form of the still. "On the other hand, the patent or grain stills which are employed for the manufacture of silent spirit"—he again uses the term "silent spirit" as equivalent to "grain spirit"—"from which the bye-products must be removed as far as possible, have been improved in many ways. . . . Patent grain or silent spirit is principally used in the United Kingdom in the arts, for blending with malt whiskey, and for the manufacture of gin, British brandy, and various liqueurs and cordials." Then page 807, first column, line 8 from the bottom: "The main constituent of spirits is, of course, ethylic alcohol—spirit of wine—but all spirits contain small but varying quantities of bye-products, and it is by these that the character of a spirit is determined."

3088. (*Mr. Guillemard.*) Is he speaking of pot and patent spirits, or only the one?—He says pot spirits. I think he is speaking entirely of pot, but I will refer to the quotation.

3089. (*Dr. Horace T. Brown.*) It is page 807, first column, line 8 from the bottom?—Perhaps we can gather it from the context. It is the beginning of paragraph 3: "The bye-products are mainly formed during fermentation, but are also to a certain extent pre-existent in the raw materials, or may be formed during the operations preceding and succeeding fermentation. The nature of the bye-products is complex and varies sensibly according to the raw materials

employed and the method of malting mashing fermentation and distillation."

3090. (*Mr. Guillemard.*) It would seem to include both?—I do not think so. I do not know whether I can place my finger on the actual sentence at the moment, but by using the term "silent spirit" he implies there are no bye-products, or so few that they do not count.

3091. Does the expression "silent spirit" occur in that sentence?—It is not in, but I mean it is by the same author. If the spirit were silent there would be no bye-products to characterise it.

3092. (*Dr. Horace T. Brown.*) Would you kindly go on to the next quotation?—Yes. It is p. 807, second column, line 10:—"The fusel oil of British pot still spirits"—then he puts in brackets (whiskey), that is using it as a synonym—"is chiefly composed of amylic and butylic alcohols, whereas in patent spirits propylic alcohol is the preponderating factor; that is, in the finished or fine spirit, for the fusel separated from patent spirit in the course of distillation consists mainly of amylic and butylic alcohols. Broadly speaking, the higher alcohols present in pot are of higher molecular weight than those in patent spirits. Potato fusel contains a high proportion of isobutylic, grain fusel of n. butylic, alcohol." Then line 7, from the bottom:—"Concerning the changes in the higher alcohols, considerable divergence of opinion exists, and it is, to say the least, doubtful whether the fusel oil, to which the baneful effects of new or raw spirits were formerly ascribed, actually does increase with age. The experience of the author is rather to the contrary." Then there is footnote 1, on p. 809, first column:—"The above applies chiefly to grain or 'silent' spirit, in the manufacture of which a product which is practically pure alcohol is desired." I think that answers your question as to whether he was applying it to bye-products. The article which is practically pure alcohol cannot contain a material amount of bye-products. "These methods can only be used to a limited extent by whiskey and brandy distillers, for a complete removal of bye-products also entails destruction of the spirits' character." . . . I have made a note myself that the author is here referring to certain processes for purifying spirit.

3093. Then you make a statement with regard to the proprietors of Dewar's Whiskey, a statement which was sworn to by one of the largest blenders?—No; it is "sworn to be one of the largest blenders."

3094. I beg your pardon. Would you kindly give me the statement of that as briefly as you can?—There was an exhibition at the Alhambra Music Hall, with fields of barley, pot stills, etc., exhibited to show what whiskey was.

3095. What is the date of this?—It was during the progress of the trial at the Police Court. Mr. Bramall, I notice, founded a question on it.

3096. Is it 1905 or 1906?—It would be 1905, November or later. The reference is to the 5th day, p. 50.

3097. Would you kindly go on with your statement?—They showed no maize and no patent still. I believe they were invited to show a patent still, but did not. Whatever their own practice was, their precept was that Scotch whiskey was all malt spirit, produced in a pot still, agreeing with the poet and exciseman, Robert Burns.

3098. Was there any evidence disclosed at either trial that the public have ever been made acquainted with the fact that any patent still, or any modification of pot still, has ever been employed?—None that I could find.

3099. There was a certain amount of evidence with regard to Cambus, I think?—Yes, there was a good deal of evidence of Cambus being sold as a grain whiskey, but the term to the ordinary man would mean something like old grain whiskey, which was a spirit made from a mash containing raw grain and distilled in the pot still, such as some of the finest modern Irish whiskeys. Grain enters into their compositions. I should like to add that Cambus was never heard of in London before the strategic advertisement of the owners, the Distillers Company, which advertisement appeared on the day after the decision at the Sessions. It was not until after the decision at the Sessions.

3100. With regard to the definition of whiskey, Sir James Dewar gave certain evidence, and in that evidence he gave a definition of his own, I believe?—Yes.

3101. The definition is, "It is a generic name given to the varieties of ardent spirit as prepared in Ireland and Scotland from the distillation of a fermented infusion of grain technically called a wash"?—That is so. That was given on the 9th day, at p. 41.

3102. You regard that as ——?—I regard that as being equivalent to saying that whiskey and spirit are synonymous.

3103. There was another witness, Mr. John MacDonald, on the 11th day, p. 60?—Yes.

3104. Did he go so far as to suggest that there would be difficulty in differentiating spirit made from potatoes from Scotch whiskey?—Yes, it is in the sense of a definition. He did not mean it would be difficult to differentiate between the potato spirit and the Scotch whiskey by smelling or tasting it.

3105. By analysis?—Yes.

3106. This witness, Mr. John MacDonald, I see, proposed a definition?—No; by the "witness" I mean myself on this occasion.

3107. You proposed the following definition?—Yes.

3108. "Scotch whiskey means the spirit distilled in Scotland from the fermented wort derived from barley malt in a pot still"?—Yes.

3109. You further suggested a definition for Irish whiskey, which is this: "Irish whiskey means the spirit distilled in Ireland from the pot still from the fermented wort derived from malt or malt and barley, with or without the addition of oats, wheat and rye, or any of them, cereals indigenous to Ireland"?—That is so.

3110. That is your definition?—Yes.

3111. You further said that that definition had been suggested by some of the most important distillers in Ireland?—That is so.

3112. You have seen a good many samples of patent still spirit?—I have.

3113. Have you been able to detect any flavour of whiskey in any of them?—No.

3114. You state there is a characteristic flavour common to all Irish whiskies, and another flavour equally characteristic and common to all Scotch whiskies?—That is so.

3115. Of course there are variations among the distilleries themselves in flavours?—Yes.

3116. You maintain that Irish patent still spirit does not vary in quality from the Scotch still spirit?—That is so. They are practically the same article.

3117. Patent still spirit is practically the same whether it is made in Ireland or Scotland?—That is so.

3118. You also quote the evidence of Mr. Francis Joseph Stevenson, who was a witness for the defence in the police court?—Yes.

3119. Would you kindly tell us what that was?—The question was: "They are practically the same spirit, are they not?—Irish patent and Scotch patent? Yes?—I think they are practically the same spirit as far as my palate goes."

3120. I understand that you are prepared to describe the practice of distillation both in the patent and the pot still?—Yes.

3121. I think we have had a very full explanation?—Well, I did not put it in full because I thought you might have had a lot of it.

3122. Unless any Member of the Commission wishes a further account of it I do not think we will go into that. You make a great point that in the pot still all the bye-products of the fermentation and any essential oil of the malt or grain employed is all distilled off together with the spirit?—Yes.

3123. And that these bye-products are found in the finished whiskey?—That is my opinion.

3124. Then you hand in, I suppose, these results of analyses?—Yes.

3125. I see they are strong feints, strong low wines, mixture of strong low wines and strong feints?—Yes.

3126. And also of four new whiskeys from the same

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distillery?—Yes. They are Irish, of course. The Scotch practice is that they do not differentiate between strong and weak low wines, or strong and weak feints. In Ireland the practice is—at all events it was so at this distillery—to separate their low wines into strong and weak low wines, and their feints into strong and weak feints.

3127. (*Dr. Adeney.*) That is not done in Scotland?—None of these distilleries I have seen in Scotland did it.

3128. (*Dr. Horace T. Brown.*) Would you hand in those analyses which you have just referred to?—They are all set out there.

3129. You formally hand them in?—Yes. (*See Appendix D, Table I.*)

3130. You have also examined the "spent wash" and "spent lees"?—Yes.

3131. Have you found anything more than traces of higher alcohols?—No; in some they are quite absent, and in some there are mere traces.

3132. You say that Dr. Bell stated before the Select Committee that "The first product from the pot still, which is called low wines, contains the entire bye-products produced in the distillation of the fermented wash"—Yes; question 3452.

3133. Then there was a certain theory put forward by Mr. Wallace at the police court with regard to the aldehydes in the feints. Would you kindly explain what that was?—The theory was that the aldehydes in the feints were instantaneously oxidised to acetic acid on exposure to air, but no analytical evidence was given in support of this statement, and it was not supported by Sir James Dewar. I mean Sir James Dewar did not put it forward.

3134. You maintain that the patent still is something more than a still, being also a rectifier or fractionating apparatus?—That is so.

3134*a*. You regard the large excess of steam which is employed as having some particular effect?—Yes, having what we call a hydrolytic action.

3135. Destroying the compound ethers?—Yes.

3136. What is the average amount of ethers in five new whiskeys from different distilleries?—I found it to be 29·2 per 100,000 of absolute alcohol.

3137. With a variation——?—From 21·6 to 37·2.

3138. And the mean of the two samples?—The patent spirit comes after that.

3139. The mean of the two samples of patent spirit?—Was 18·3.

3140. You have also stated there is lost a lot of aldehydes by the so-called ether pipe?—It is an incondensable gas pipe, as it is sometimes termed, at the top of the rectifier.

3141. You also give the average amount of aldehydes in New Irish Whiskey, in New Lowland Malt, and New Patent Spirit. Perhaps it would be more convenient to hand those in?—Yes. I formally hand them in. (*See Appendix D, Table II.*)

3142. Then the patent still separates really into how many products?—Five products.

3143. Tell us what those are?—(*a*) Fusel oil which is not returned to the analyser; (*b*) hot feints which are returned to the analyser; (*c*) spirit which is taken off at the spirit plate; (*d*) condensed products from the ether pipe returned to the analyser; (*e*) aldehydes which are lost in a state of vapour through the ether pipe.

3144. What is the nett result of that?—(*a*) and (*e*), that is to say, the first and last, are separated entirely from the final product, which is also poorer in ethers, on account of the decomposition of the ethers in the analyser. Then Dr. Schidrowitz makes a point which I do not make myself, that the higher alcohols in patent spirit are of lower molecular weight than those in pot spirit.

3145. I think we have already had that?—We have already had the same thing. That was with reference to patent spirit. I thought I had better reproduce that, and refer to the quotation again.

3146. Then there is a reference in your *précis* to the maize flavour?—Yes. There is no maize flavour in patent spirit, and I deduce from that that all essential oils of the maize or other grain are removed.

3147. Is it possible, by any change of operation in the patent still, or by changing the position of the spirit plate, to obtain a spirit less pure than it could possibly yield?—Yes, I think so, but I think, at the same time, it is impossible to obtain a spirit having either the chemical composition or characteristics of Irish or Scotch whiskey.

3148. Do you think it would be possible in a pot still to rectify a pot still spirit so that it might be as chemically pure as a patent still spirit?—No, not if you had no chemicals and no rectifying column.

3149. Then we come to the second question, which was put to you by the Islington Borough Council, as to whether the difference between pot and patent spirit could be detected analytically?—Yes; that was the second part of the enquiry.

3150. For this purpose I suppose you examined a number of pot and patent spirits from Scotland and Ireland?—Yes. I hand in the results. (*See Appendix D, Table III.*) May I point out that among those results you will find a few at the end, the last page, examples of Comber, which is an Irish whiskey; Cambus, two samples; and Old Taylor (Bourbon) whiskey, and American rye. Those were done in the course of the trial, but I do not found my views on those. Cambus, you will observe, has a total coefficient of impurities of 61·4 only.

3151. I think it is desirable to know the particular analyses on which you founded your standard, if you would kindly point them out?—With the exception of the last four.

3152. The whole of Table III.?—Table III. with the exception of the last four samples in Table III (*l.*).

3153. What is this unknown sample 33?—That is included. The distillery is unknown: that is all.

3154–6. From your general results you concluded if the admixture was a material one it could be detected?—That is the conclusion I arrived at.

3157. You have used the ordinary methods of determining the furfural, the aldehydes, the acidity, and the ethers?—Yes. I do not think there is any dispute that these methods are generally accepted.

3158. What method have you used for determining the higher alcohols?—I have used the French method. I believe it is called "official" in my proof. I believe it is official, but I could not place my finger on its being official. It is the process of the Paris Municipal laboratory, worked out by MM. Girard and Cuniasse.

3159. You say there are objections to each of those?—Yes. I have given four methods. There is the Marquardt method, and Dr. Bell's colorimetric method.

3160. What did he standardise with?—I have forgotten, but he did not remove the furfural. He left the furfural, but I forget whether he standardised with amyl or butyl alcohol.

3161. Then the third process?—That is the Allen-Marquardt method. Then there is the French official method, the colorimetric process, and then there is a process of Dr. Clarke's which he told me privately. That is a colorimetric process also, and there are other methods.

3162. You consider there are objections to each one of those methods?—Yes.

3163. And it is a question of selecting the one most suitable?—Of selecting the one most suitable under the circumstances.

3164. And you selected the French method?—I selected the French method.

3165. The French official method?—The French official method—I believe it is official, but I have a doubt about it.

3166. (*Dr. Adeney.*) Is that official for whiskey?—No. The French have not any whiskey.

3167. What is it official for?—Brandy.

3168. (*Dr. Horace T. Brown.*) Would you briefly describe the method?—In this method 20 cubic centimetres are boiled for one hour under a reflux condenser with ½ gramme of metaphenylenediamine hydrochloride, and then distilled. 10 c.c. (at 50 per cent. strength) are treated with 10 c.c. sulphuric acid, boiled 15 seconds, let stand for 45 minutes, and com-

parisons are made with standards containing varying known amounts of isobutyl alcohol similarly treated.

3169. You do not claim to determine the actual amount of the higher alcohols in the sample?—No, but the method gives the amount of isobutyl alcohol which produces the same coloration with sulphuric acid as the higher alcohols in the sample produce.

3170. So that the figure obtained is an analytical factor?—Yes.

3171. Which gives you, on the same sample, constant and comparable results?—Yes.

3172. Both in the hands of the same and different operators?—Yes.

3173. It is practically the method used in the Paris Municipal Laboratory?—Yes. That is where I get it from really, from MM. Girard and Cuniasse's work.

3174. M. Girard, I believe, gives some results on Irish whiskeys?—Yes. I have not brought the whole analyses with me, but the coefficients are 461·9, 477·3; he has some Scotch whiskies giving 443·7, 412·6, 385·4, 442·6, and a whiskey which was undoubtedly not normal whiskey, which was obtained in Paris, which gave only 200·2.

3175. This colorimetric process differs from that adopted by Dr. Schidrowitz?—Yes. He uses amyl alcohol as his standard instead of isobutyl.

3176. That is the only difference?—I think so. I think he removed his furfural also. I have not got the paper in front of me at the moment, but I only point out that no figures which I have obtained will compare directly with Dr. Schidrowitz's figures.

3177. You think certain statements made to the Commission the other day with regard to the Scotch pot still distillers being frightened of the blenders are borne out?—Yes, based on a certain amount of evidence which was given.

3178. Was this evidence given before the Select Committee which you refer to?—No; this is evidence given at the Police Court, Mr. MacDonald's evidence.

3179. That is the evidence of a pot distiller?—That is the evidence of a pot distiller who appeared for the defence.

3179*a*. Will you kindly give us the question and answer?—"(Q). They have threatened to withdraw their orders if you did." The point was as to whether he was allowed to sell small quantities to the public, and the reference to the "they" is the blenders. "(A). No, they have never directly threatened us, but that would be the result."

3180. Have you any further evidence to give with regard to the pot still?—Yes. There was some more evidence given at the police court as to how the pot still whiskey in Scotland is controlled by the blenders. It is given in an answer by Mr. William Sanderson on the 10th day, p. 48. "(A). You could not sell pot still unless you made it purposely for drinking by itself. The ordinary pot still whiskey is made for blending." Again, in the cross-examination of Mr. Robert Douglas, on the 11th day, at p. 10: "(Q). Do you know that they make very rough pot still on purpose for the so-called blending?" "(A). So I have heard."

3181. Then you consider that those answers show not only the relations between the blenders and the pot still distillers, but also prove that some pot still men are making something unfit to drink by itself?—That is the conclusion, if the evidence is trustworthy. It is evidence that was given before the Court.

3182. You have something to say about the different physiological effects of pot and patent products?—Yes. I should like to draw the Commission's attention to an answer of Sir James Dewar, No. 4,373, when we were before the Sessions: "In the West Highlands if you are shooting or in the open air all day you want a highly-flavoured whiskey, and you like it highly flavoured. You like a fusel oil flavour. If you are doing sedentary work in a town, you cannot take whiskey of that class at all. You are miserable in the morning with relatively small quantities, and I know that friends of mine have said to me, 'If I drink your whiskey I never feel any ill effects; if I take what I take at my club I feel at once I cannot do my mental work or writing with the same facility.'" Perhaps I should explain that Sir James Dewar has no connection with the firm of Dewar, and "your whiskey" does not mean "your whiskey" in the sense of being Dewar's whiskey. Sir James Dewar explained he always drank Cambus.

3183. Can you put in certain prices of grain?—Yes.

3184. You put those in evidence?—Yes, formally. (*See Appendix D, Table IV.*)

We have already had the advertisement of Cambus. I do not know whether I can put in these samples of patent spirit, rectified spirit, and some blends. I have, if you care to see them, a few samples like this, and they will go much further than any evidence I can give by word of mouth. (*The witness produced various samples.*) I do not know whether you would like to have the patent still spirit and the rectified spirit for comparison, or whether you would like to have some of the genuine whiskies, and so on.

3185. (*Chairman.*) We would like the pot still first?—What I have done is this. I have taken some patent still spirit, and I have reduced it to about 18 under-proof, and I have mixed that with an equal portion of four different spirits—John Jameson's ten-year-old, Glendronach—that is Highland malt, Jamaica rum, and Martell's Three Star brandy.

3186. Are they pot?—They are pot. John Jameson's, Glendronach, Martell's Three Star brandy, and some Jamaica rum.

3187. Let us have the first sample pure by itself before we have any mixture. We will take the pot still pure first?—That is some John Jameson ten-year-old. (*Sample handed to the Commission.*)

3188. Is it by the smell you tell the difference?—You will smell it better in a wine-glass, and possibly you would smell it better if you dilute it a little.

3189. (*Dr. Horace T. Brown.*) We will take that afterwards. You were, I believe, the principal witness in the Brandy Case heard at the North London Police Court?—Yes.

3190. You subsequently gave evidence at the Clerkenwell Quarter Sessions on an appeal from a conviction by the Kensington Bench?—Yes, there was no appeal in the North London case.

3191. That was a brandy case?—Yes, brandy. The other was also a brandy case, and they appealed to the Quarter Sessions from a conviction by the Kensington Bench.

3192. Those cases were under the Sale of Food and Drugs Act?—Yes.

3193. You also, I believe, made a series of analyses of Jamaica rum and also analysed two samples of rum sold as Jamaica rum?—Yes, the allegation against the vendors was that it was not Jamaica rum.

3194. The defendants pleaded guilty?—Yes. In the first case they pleaded guilty, and in the second case they pleaded guilty also.

3195. Those two cases were taken under a different Act?—Yes, the Merchandise Marks Act.

3196. You are prepared to give, if called upon, similar evidence as to brandy and rum?—Yes.

3197. You are confining yourself now to whiskey?—Practically entirely.

3198. You have a certain opinion about the importation of so-called "Imitation Rum"?—Yes.

3199. What are those views?—I have never heard of imitation rum being on sale to the public anywhere. I believe that all imitation rum that is imported is fraudulently sold as rum.

3200. Will you kindly refer to the latter part of your *précis*?—About the Customs?

3201. Yes, give us your opinion as to that?—The Customs have now the power to stop the importation of tea which is not genuine. This power was given them by the Sale of Food and Drugs Act, 1875, Section 30. They also have certain powers over adulterated or impoverished agricultural produce. That is under the Sale of Food and Drugs Act, 1899, Section 1. The addition of other adulterated articles to the list would therefore not create a precedent.

3202. What is the exact inference you wish us to draw from that statement?—It might be objected that if the importation of imitation rum were prohibited it would be putting new duties on the Customs, but already they have the duty of stopping the importation of adulterated or impoverished tea, and they

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have certain duties with regard to agricultural produce.

3203. Then you put in a large number of analyses?—Yes. Those we have already referred to. I formally put them in. (*See Appendix D, Tables I., II., III.*)

3204. (*Chairman.*) The Customs have no power to stop adulterated brandy?—Not at present.

3205. They have, if it is not brandy at all?—I do not think they could stop it if it was not brandy at all. There is a lot of stuff that comes in that is not brandy that they do not stop.

3206. (*Dr. Horace T. Brown.*) Going over this proof, it strikes me there has been an omission which is rather an important one?—Yes?

3207. You nowhere state, as far as I can see, what your minimum standard is for whiskey—what is the minimum co-efficient of impurities?—The minimum I took was 380. You will find it on looking through the analyses. I think on one page there is an Irish whiskey, quite new, 378, which is practically 380, and you will find among the Lowland Malts 381.

3208. 380 was your ultimate standard?—I took 380. The lowest Irish was 378, and the lowest Scotch was 383.

3209. That is not the higher alcohols, but the co-efficient?—Yes.

3210. Including all impurities?—Including all impurities. It is 380 parts in 100,000 of alcohol, not in the whiskey itself, but in the absolute alcohol from the whiskey.

3211. (*Mr. Guillemard.*) Did Mr. Fordham adopt your figure of 380?—That was the figure I put forward at that trial, and Mr. Fordham convicted.

3212. He adopted it, did not he?—No, it did not become material really, because it was admitted by the defence subsequently that there was 90 per cent. of patent still spirit present in both samples, so that it really became a question for the Court to decide whether patent still spirit was whiskey.

3213. (*Dr. Horace T. Brown.*) You have a definite standard to work to?—I take 380.

3214. You use 380?—I use 380. I should like, if I may, to put in another bottle. This is genuine Rye whiskey from America.

3215. Rye whiskey?—Yes, not Bourbon. I had some samples of Bourbon, and I kept one back. It was "Old Taylor Bourbon," but young Taylor called on me, and we had to open it.

3216. There are no other points you would like to call attention to?—No.

3217. (*Chairman.*) You want to call attention to the bouquet of these samples?—Yes. Will you take Scotch whiskey or Irish whiskey?

3218. Will you give me the pure pot still, or the pure patent still?—Yes. Will you have pure Scotch or Irish?

3219. I do not care which—let me have one of each?—That is pot still Scotch (*handing sample*) and I think you have the Jameson there; that is pot still Irish.

3220. (*Dr. Adeney.*) Is that patent still you have *there*?—That is patent still reduced to about 18 under proof.

3221. (*Dr. Horace T. Brown.*) Which is the new patent?—The two-year-old.

3222. In the cask two years?—Yes, two years.

3223. I should have thought it would have acquired more colour than that?—It is reduced. I have the strong here.

3224. (*Dr. Adeney.*) May we have the strong?—Certainly. (*Sample produced.*) That is 22 over proof.

3225. (*Dr. Horace T. Brown.*) That is the patent?—That is the patent.

3226. (*Dr. Adeney.*) That is two years?—Two years in wood. At least that is my information. That is the way it was sent to me.

3227. (*Chairman.*) Will you take this glass that has your sample of the pure patent. Just smell that, and, if you like, taste it. (*Glass handed to witness.*) Would that be recognised as whiskey at all?—I would not like to recognise it as whiskey. I cannot personally tell the distinction betwen *that* and *that* which is pure rectified spirit.

3228. (*Dr. Horace T. Brown.*) Have you the rectified there?—Yes.

3229. I should very much like to try that?—I have also some rectified reduced to the same strength.

3230. I prefer that?—It is there. (*Handed.*) I brought the original bottle. That is about 90 per cent. alcohol. I have here also some Jameson which has been mixed with an equal bulk of patent spirit. That would be known as a blend. That is half Jameson (*handing another sample*).

3231. (*Mr. Guillemard.*) Half the ten-year-old?—Half the ten-year-old taken out of the same bottle and half reduced patent spirit. I have a Scotch blend if you would like it. That is Glendronach blended with 50 per cent. of patent. They are equal bulks. I also have rum and brandy similarly treated with the originals here.

3232. (*Dr. Horace T. Brown.*) Have you any new pot?—I think I have some new pot in the other parcel.

3233. The Chairman would be glad to have some information from you about British brandy as to what it is, or rather what it was, because I think it is not known in the trade now?—I believe it is still known.

3234. British brandy?—I think so. I cannot tell you from my own actual knowledge.

3235. (*Chairman.*) What about the stills?—British brandy, I understand, is something like brandy diluted with patent spirit. That is some Martell with an equal bulk of patent spirit (*handing sample*). That is the Martell without the patent spirit in it (*handing another sample*). That is some John Jameson, new (*handing another sample*).

3236. Is there any distinction between the pot still and the patent still for brandy, the same as whiskey?—That is what we had to fight in the brandy case, and we persuaded the Court, both at the Police Court and at the Sessions, that brandy must be made in a pot still. There was the same fight in the rum case.

3237. Do you know anything about the manufacture abroad?—I do not know much, but it is made abroad from wine.

3238. (*Dr. Horace T. Brown.*) Is that quite correct? You did not limit it to brandy made in a pot still. Is the word "pot-still" a definition?—We got it in.

3239. You mean your standard was such that it would necessitate it being made in a pot still in order to get 80 parts of ethers per 100,000?—That is so; and it was also given in evidence that it ought to be made in a pot still.

3240. There was the same fight in the rum case, you say?—Yes.

3241. I hope we shall have your evidence on the brandy case?—I analysed a number of brandies and I found that 80 was the minimum of ethers, and we certainly prosecuted the owners of certain brandies containing under that, and the Court upheld our view.

3242. There is no question as to what the material should be? They all agreed it should be distilled from grapes?—No; they were not even agreed on that. The defence raised the issue first that the term brandy was not confined to grape spirit, and secondly, if confined to grape spirit it might be grape spirit which had passed through a patent still.

3243. (*Chairman.*) That is as far the Commission will trouble you to-day?—Do you wish me to get some evidence as to brandy, and would you like some rum analyses put in?

3244. We will let you know to what extent we should like to do that, if at all?—Thank you.

The witness withdrew.

Adjourned to Monday, 30th March, at 12 o'clock.

SEVENTH DAY,

Monday, 30th March, 1908.

At the Westminster Palace Hotel.

PRESENT:

LORD JAMES OF HEREFORD, G.C.V.O. *(Chairman)*.

L. N. Guillemard, Esq., C.B.
W. E. Adeney, Esq., D.Sc., F.I.C.
J. R. Bradford, Esq., M.D., D.Sc., F.R.S.
H. T. Brown, Esq., LL.D., F.R.S.
G. S. Buchanan, Esq., M.D.
J. Y. Buchanan, Esq., M.A., F.R.S.
A. R. Cushny, Esq., M.D., F.R.S.
A. V. Symonds, Esq. *(Secretary)*.

Mr. Frank Litherland Teed, recalled.

Mr. F. L. Teed.

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3245. (*Dr. Horace T. Brown.*) Can you tell us the approximate date in 1904 when the Islington Borough Council requested you to investigate the subject of whiskey?—Approximately October or November.

3246. 1904?—Yes. The only way I can fix it is that it was in December, 1904, that I first visited Ireland in this connection. It may have been earlier.

3247. May I ask whether this request originated with the Borough Council, or whether you made any suggestion or recommendation to them in the first place?—As far as I am concerned it originated with the Islington Borough Council. I made no suggestion.

3248. Then the date you have given us, I suppose, was subsequent to Mr. Fordham's decision on the brandy case?—Yes.

3249. Which, I believe, was given on May 30th, 1904?—I think that was about the date. I can fix that date if you like.

3250. That is near enough. In the brandy case both your definition and the analytical standard you fixed for genuine brandy were upheld by the magistrate, I believe, and a conviction followed?—Yes, I think he upheld the standard, but the main decision in the brandy case was this. In Mr. Fordham's judgment he pointed out that most of the witnesses had stated that brandy must be a spirit derived from the grape, only two witnesses had stated that it might be a spirit derived from other sources mixed with grape spirit.

3251. That was the point I wanted to get at. There was no serious objection raised by the defence to your definition of brandy in so far as it must be a spirit exclusively derived from the grape. You were all fairly agreed on that point?—The defence opened the other way, that it might be mixed with grain spirit, and two of their trade witnesses maintained that it might be. It was brought out in evidence that spirit was produced from sick wine, and wine that would produce a bad brandy was passed through a patent still or some such apparatus and a featureless spirit was produced from it, and Mr. Fordham held that that featureless spirit was not brandy.

3252. The question turned mainly on whether a certain minimum standard, which you fixed for the compound ethers was one which would with certainty differentiate the grape spirit from the mixture of grape and grain spirit?—Yes, I think it really was that. Would you allow me to put in a copy of Mr. Fordham's decision? I have not one with me, but I can send you one.

3253. I have seen it, thank you. The brandy case, then, is by no means on all fours with these whiskey cases, in which both your definitions and analytical standards have been strongly contested?—I do not know. I think the defence certainly contested the definition and the standard also in the brandy case.

3254. May I ask when you first commenced your investigations of whiskey? You have given us when you were requested to do it?—I think I got samples shortly after the request and began to analyse them.

3255. That was when?—In 1904.

3256. In October, 1904?—It may have been earlier.

3257. Had you any special knowledge of whiskey before that time?—From the chemical point of view?

3258. From the chemical point of view?—No, not specially.

3259. Then how long in all were you studying the question before the prosecution commenced on November 6th, 1905?—I think it was about six months.

3260. During that period of six months, I suppose, you had your usual official duties to perform?—Yes.

3261. You also had to attend to your private practice?—Yes.

3262. Can you give us any idea of the proportional amount of your time which was occupied by these important whiskey studies during that six months?—It is rather difficult because, as you know, in a laboratory several things may be going on at the same time. It did not absolutely stop laboratory work. The number of samples I analysed in order to obtain my standard was, I think, 50.

3263. I will ask you about those presently, if you do not mind?—That was the analytical portion of the investigation. The rest of the time was whenever I met a man who was more or less connected with the trade I mildly cross-examined him. Also I enquired of anybody I happened to meet what his views on whiskey were and why.

3264. You were, I suppose, fully alive to the enormous commercial interests involved and to the grave responsibility you were undertaking in attempting to fix for the first time a legal definition of whiskey?—I take all that in a day's work. A public analyst has enormous responsibilities.

3265. You were aware, of course, before you commenced that a Select Committee of the House of Commons in 1890-91, after a long enquiry, had refused to attempt a legal definition of whiskey or to put any restrictions on the blending of a pot and patent still product?—I knew that, yes. I read the report of that Committee.

3266. You were able by studying the question for a few months to come to a positive conclusion which happens to be diametrically opposed to the finding of that Committee?—I do not think it is diametrically opposed. They did not find it, but I think there is material in their report which supports my contention.

3267. I am speaking of the report alone?—I am speaking also of the report alone, not the evidence.

3268. So that single-handed—I suppose you were single-handed in this investigation?—Unfortunately.

3269. So that single-handed and without consultation with anyone else and with no further evidence than you could collect for yourself, you arrived at a satisfactory definition of whiskey both Scotch and Irish, and also an analytical standard which will differentiate pot still whiskey from a blend of the products of the pot and patent stills?—I arrived at a definition and I arrived at what I may call a working standard. I was not the first to arrive at a working standard. That was known, as was pointed out by Sir James Dewar at the time of the Commission. It is nothing new to be able to distinguish between pot and patent still.

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3270. I suppose you will admit that in considering such a question as this, the legal definition of a manufactured article, and the standards of purity laid down for the guidance of the analyst can be considered quite separately?—Would you mind repeating your question; I have not quite grasped it.

3271. Will you admit that the question of legal definition may be considered quite apart from the question of analytical standard?—Absolutely.

3272. The definition, for instance, may be quite correct, and an analytical standard may ——?—Be quite wrong.

3273. May be with increasing knowledge subject to modification from time to time?—Certainly, I quite agree with that.

3274. I propose therefore, in the first instance, to consider your definitions only?—Certainly.

3275. And to ask for information as to how you arrived at them. You said that Scotch whiskey means the spirit distilled in Scotland from the fermented wort derived from barley malt in a pot still?—Yes.

3276. And you define Irish whiskey as "the spirit distilled in Ireland in a pot still from the fermented wort derived from malt or malt and barley with or without the addition of oats, wheat, rye, or any of them, cereals indigenous to Ireland"?—Yes.

3277. Mr. Bramall, in his evidence, added to this a general and more comprehensive definition of whiskey of all classes, which ran as follows: "Whiskey is a spirit distilled from grain in a pot still." May we take it you accept that definition also?—Yes.

3278. Then there are three definitions?—Pardon me, that whiskey is a spirit distilled from grain in a pot still would embrace the American and Canadian whiskies.

3279. Yes, it is a generic definition?—As long as you understand that I mean this to embrace those whiskies.

3280. Quite so?—That it is too vague for Irish or Scotch whiskey.

3281. But Irish or Scotch whiskey will be included in the last definition?—It would be included, but I consider that the term grain should be restricted when used in connection with Irish and Scotch whiskey.

3282. That we will come to presently?—It should not include maize or rice.

3283. You accept that as a general definition of whiskey?—Certainly.

3284. You have told us now that your investigations during those six months included two visits to Scotland?—Yes.

3285. One to Ireland, during which you inspected both pot and patent stills in action, and that you made inquiries from persons connected with the trade and from members of the public unconnected with the trade, and, further, that you read papers dealing with the subject, which papers you have specified?—Yes.

3286. I should like to take your Scotch visits first. Will you please tell the Commission how many distilleries you inspected in Scotland?—Three, I believe.

3287. I am speaking now of distilleries altogether?—I did not see any patent stills in Scotland.

3288. Of these three how many were Highland pot distilleries and how many Lowland pot distilleries?—They were all Highland.

3289. Three Highland distilleries and no patent distilleries?—No patent.

3290. Then you visited none of the Lowland, the Islay, or the Campbelltown distilleries?—No.

3291. We have been told by Mr. Tedder that there are 140 separate pot distilleries in Scotland?—Yes.

3292. Do you think it probable that by visiting three of these, all Highland distilleries, you could have gained a sufficient insight into the general methods in use in the whole of Scotland?—I was informed by the distillers that I met that the practice was the same throughout Scotland, and it certainly was the same in those three distilleries.

3293. Now with regard to Ireland, how many distilleries did you visit there?—One I visited throughout, I suppose, three days, and watched it very carefully. That is a pot still; another pot still distillery I simply walked through; in fact, two others I just walked through, and I saw a patent still in action.

3294. Then you only saw three pot distilleries?—Yes—one thoroughly from start to finish.

3295. I think you have said elsewhere that you saw four pot distilleries and one patent in Ireland?—It is very possible I did. One goes in and sees a pot still. I do not know whether I ought to classify that as seeing a distillery or not.

3296. So that, taking Ireland and Scotland together, out of the 177 distilleries you visited only eight or nine?—Less than that.

3297. That is about 5 per cent. of the total number?—Something like that.

3298. That is a little over-stating it, perhaps?—Yes.

3299. Of these how many were patent distilleries?—One.

3300. Did you spend any great amount of time in these eight distilleries?—In one Scotch I spent about two days, and I think about three days in one Irish.

3301. Did you spend a long time in the patent distillery?—No, not very long.

3302. As far as your observations went did you find any material difference in the construction of the pot stills in Ireland and Scotland?—It struck me that the Irish were very much larger stills.

3303. But they were much on the same lines?—Yes, but they worked with larger stills. Of course, there is a difference in the process. You do not want that.

3304. That I understand. It is the construction of the still I was speaking about more particularly. You will no doubt agree with me that in framing a definition we must not use terms which are not in themselves clearly defined?—Naturally.

3305. So could you define a little more closely what it is you mean by a pot still? I mean generally. I do not ask you for a particular description of the still?—I do not know how to define a pot still. There is one behind us there. That is what I understand to be a pot still.

3306. That you regard as a typical pot still?—As a typical pot still.

3307. Would the term be applicable to a still of that general character if it happened to be continuous in working or were furnished with a rectifying head, or we will say was heated by steam instead of by the open fire?—I should say that it would be applicable to it if heated by steam and not by the open fire, but I should bar the rectifying head.

3308. Did you see any stills of that kind in the six or seven pot distilleries which you visited?—I saw the line arm, which I should not call a rectifying apparatus—it is so feeble—and I saw some sort of enlargement of the outlet from the still, which was kept cool, in one Scotch distillery, but I should not even call that a rectifying column.

3309. Supposing there were a still of that kind amongst the 158 pot distilleries which you did not see, would you be prepared to recommend that proceedings should be taken against those distillers if they presumed to sell their product as whiskey?—That is a question of degree entirely; if they put a real rectifying column so that they get a product which is to all intents and purposes patent spirit, certainly, but if the rectifying column, if present, is of a very feeble nature, I should think it ought to be disregarded.

3310. (*Chairman.*) What do you mean by disregarded?—It should still be considered a pot still.

3311. (*Dr. Horace T. Brown.*) Now let us come to the materials used by the pot distillers. In the course of your enquiries in Scotland did you come across any evidence of the use of unmalted indigenous cereals, such as barley, wheat, oats or rye?—No.

3312. You know of no evidence to show that such unmalted cereals are used, or have been used, in the preparation of Scotch whiskey?—By "have been" to what date are you referring—to any date?

3313. Yes, any date?—I came across in some books of about 80 years ago, perhaps longer than that, that certain raw grain was used in Scotland, but I understand it is not used now.

3314. One point that puzzles me a little in your three definitions of whiskey, Scotch whiskey, and Irish whiskey, is this. A pot distiller, provided he works in Ireland, is to be permitted to use along with his malt any proportion he likes of raw unmalted grain in the shape of barley, wheat, oats and rye, and to call his product Irish whiskey. If that distiller migrates to Scotland and wishes to use exactly the same materials he is only to be allowed to call his product whiskey, and although it may be whiskey made in Scotland it is not Scotch whiskey. This seems a curious refinement of expression which you will no doubt be able to explain to us?—The definition was founded on the fact that Irish whiskey almost invariably does contain the constituents, or some of them, that are embraced by that definition, and what is commonly known as Scotch whiskey does not contain them.

3315. Then your definition of Scotch whiskey is based entirely on present practice, that is, you maintain that no raw grain is used in a pot still?—I believe not. There was, I think, some evidence given that at one of the D. C. L. distilleries a certain amount of raw grain was used.

3316. In a pot still?—In a pot still, yes.

3317. You would bar that, I suppose?—It is not what would be understood by Scotch whiskey.

3318. According to your definition?—My definition, of course, is my attempt to reflect the general opinion that I have gathered from other people.

3319. So that if it could be shown that at the present time there is a certain amount of raw grain used in the pot distilleries of Scotland how would that affect your definition? You have ruled raw grain out by your definition?—Yes.

3320. Why did you do that if you have reason to think that any raw grain is at the present time used in Scotland?—I did not know of any raw grain being used until the evidence of one of these D. C. L. men was given in the case.

3321. That means, I suppose, that your enquiries were not sufficiently extended before you made your definition?—I do not think they publish the fact that they used raw grain. I think my enquiries would probably not have ascertained it.

3322. Suppose it could be shown that unmalted grain has within the last 50 or 60 years been extensively used in Scotch pot distilleries, would it have any influence with you?—I think it would, if it could be shown.

3323. It would have influence?—Yes.

3324. I have here an interesting little book which I have had in my possession for a great number of years, on "Brewing and Distillation," by Dr. Thomas Thomson, F.R.S., who was at one time Professor of Chemistry in the University of Glasgow. It is dated 1849, and at page 329 there is a chapter on the manufacture of whiskey, which opens as follows: "The kind of grain employed in this country" (he is, of course, speaking of Scotland) "for manufacturing whiskey is barley. The processes are easier, and the spirits produced have a more agreeable flavour when the barley is malted, but in consequence of the duty upon malt a portion of unmalted grain has been introduced into the distilleries. This portion has been gradually increased and amounts very commonly to four-fifths, and in some cases, it is said, to nine-tenths of the whole mixture of raw grain and malt." That is in 1849. Is not this quotation sufficient in itself to show that unmalted grain has been used, and used largely for the preparation of Scotch whiskey?—I think I just mentioned that I knew it had been formerly used many years ago.

3325. Exactly. Do you think, in that case, it is reasonable to frame a definition of Scotch whiskey on your sole responsibility, debarring Scotch distillers under pains and penalties from using a class of material which they have certainly used in the past, and which you admit may be legitimately used in Ireland?—I think that my definition, as I have already explained, was an endeavour to reflect the facts of the case. If I have been misinformed as to the facts, of course, my definition requires altering. If raw grain is used, and has been for many years used in Scotland—I do not mean years and years and years ago, but I mean within a reasonable time—of course the definition would have to be altered so as to include that, and you would have to make two Scotch whiskies; you would have to make a Scotch malt and a Scotch grain whiskey.

3326. But we are talking of these definitions as they stand?—Certainly.

3327. Not as you would like to alter them now you have heard further evidence on this question. I should now like to ask you about maize. In the first place, do you object to maize in any way on the score of public health?—No, that is not my department. It has nothing to do with public health.

3328. Taking the pot distilleries first, do you object to their using a certain proportion of maize in their grist if they think fit?—Yes, I do object. I should object to drink the product.

3329. But you know we have had evidence from Mr. Tedder, the Chief Inspector of Excise, that maize is used in a few pot distilleries?—I was not aware of that.

3330. His exact words were these, speaking of pot distilleries: "In quite a few maize is used." We may take it, I suppose, that this occurs somewhere amongst the 95 per cent. of distilleries which you did not visit?—Presumably. It certainly did not occur, or if it did occur at the distilleries I did visit I was informed that it did not occur.

3331. Would you in such cases be prepared to enforce penalties against these particular distillers for infringing your definition supposing they sold their spirit as Scotch or Irish whiskey?—Well, it is not either Scotch or Irish whiskey. It is something different from the bulk of Scotch whiskey according to Mr. Tedder's evidence.

3332. You are not prepared to admit that the spirit made from the patent still under any circumstances has a right to be sold as whiskey?—No.

3333. Not even as grain whiskey?—No.

3334. This I suppose is quite independent of the materials which have been used in its preparation?—Quite.

3335. That is to say, you would deny the name whiskey even to an all malt wash if it was distilled in a patent still?—Absolutely.

3336. Before you framed your definitions you say you made inquiries of persons in the trade and members of the public unconnected with the trade, and so on. Taking first of all persons in the trade, have you any idea how many individuals you consulted in this way?—About a dozen, I should think.

3337. A dozen only?—Not more, certainly.

3338. Then as regards members of the public, can you give us the least idea of the number of those with whom you discussed these questions?—No, that is very difficult. It might be 20 or 30, or more.

3339. Were they mostly in Ireland or in Scotland?—Chiefly London, I think.

3340. And did you find that most or all agreed with the definitions you finally drew up?—I did not submit the definitions to them, but the general opinion of the public, taking the public unconnected with the trade, was that they all had the idea that whiskey was produced in a pot still. They had never heard of any other sort of still.

3341. I suppose you framed your definitions upon what they told you?—Yes.

3342. Upon the general feeling of the people whom you consulted?—Yes.

3343. I suppose you are aware that there were several experienced witnesses before us the other day giving evidence on the part of the Pot Distillers who by no means appeared to accept your definitions as they stand. I should like to glance at that part of the evidence for a moment. Is it a fact that some of these gentlemen were consulted by you during your preliminary investigations?—Some of them, I think. If you mentioned the names I could tell you.

3344. I will come to those presently; but in order to refer better to your definitions I should like in the first instance to label them 1, 2, and 3; No. 1 being your definition of Scotch whiskey; No. 2 of Irish whiskey; and No. 3 of whiskey generically?—Yes.

3345. First of all, take Mr. Jameson's evidence. In answer to questions 1590 and 1591 he stated that he would not deny the name of whiskey to any pot still

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distilled spirit, which was in part derived from maize?—I think I have agreed with that.

3346. If in your definition 3 you hold that "grain" includes maize, I think you might claim Mr. Jameson as an upholder of your definition?—Certainly. I intended my grain to include maize, otherwise I should have said that Bourbon whiskey was not whiskey.

3347. Then there is Mr. Alfred Gilbey at Question 2087, who would not deny the name of Scotch whiskey to a pot still whiskey made with unmalted grain. Does not this contravene your No. 1 definition?—To a certain extent it does.

3348. Then again look at Question 2055. Whilst denying to a patent still product the name of Scotch whiskey, either alone or blended with pot still whiskey, he handed in certain price lists in which declared blends of this nature appeared under the general heading of Scotch whiskey?—Is that a question?

3349. I want to point out to you that some of these witnesses who were called for the pot distillers certainly did not agree with your definitions?—Mr. Jameson does.

3350. Some of them?—With regard to that last statement of Mr. Gilbey, he explained at the Police Court that he was waiting for the definition so that he should then alter his label according to the decision of the Court.

3351. Still there was evidently a feeling in his mind that he could legitimately include declared blends of that kind under the heading of Scotch whiskies?—Yes; with an explanatory label that they were not.

3352. But the statement of whether it is a blend or not does not affect the question of whether it is or is not a Scotch whiskey. It cannot alter the nature of the thing?—I think so.

3353. Do you think by simply declaring that a certain thing is a blend of pot and patent still spirit, you may then call it Scotch whiskey; whereas without that declaration you cannot call it Scotch whiskey?—I think you will find that that is the law in this country, that if I sell you milk and put on the label "This is milk and water"; I might have the big label "Milk," and underneath "This is a mixture of milk and water." There is no offence under any Act that I am acquainted with.

3354. You think the mere act of declaring this as a blend entitles you to call it Scotch whiskey?—Yes, because you are then explaining that it is not.

3355. How can you call a thing by a name and then explain that it is not the thing which you are selling?—Take French coffee: "This is a mixture of the finest coffee with the best chicory," in small letters. There is no offence. I am not upholding that this is the finest way of doing things, but I am explaining that that is the way things are done; and if you have full notice of what you are buying, you are not prejudiced by getting something which is different from what the label says it is.

3356. Then there is Mr. Daly, of Messrs. M. D. Daly and Sons, at Questions 2228 and 2280. He told us that he sells a blend of 80 per cent. of patent spirit and 20 per cent. of pot as whiskey, and invoices it as whiskey. Is not this entirely at variance with your No. 3 definition?—I do not consider that whiskey. I was not present during Mr. Daly's evidence.

3357. Then we come to Mr. Pheysey's evidence, a gentleman of very large experience, who told us that he had sold under the designation of Scotch whiskey declared blends of pot and patent?—Declared blends, yes. If you tell the people what they are getting it does not matter what you call it. Call it brandy if you like.

3358. And there was no question in his mind as to the right of calling this blend Scotch whiskey. You think that the declaration makes all the difference?—It is a mere question of law, and all the cases that have been decided are in favour of that.

3359. Further, that he calls these blends Scotch whiskey because the name has been applied to patent still spirit made in Scotland for so many years that it has been sanctified by the old usage?—I do not remember that. I thought Mr. Pheysey's views were quite different.

3360. It is Question 2809. Have you found that?—Yes.

3361. Does not this evidence at all shake your confidence in the accuracy of your definitions 1 and 3?—Pardon me; you did not read the whole of that gentleman's answer. "But I do not consider that patent still spirit is whiskey."

3362. I was coming to that point presently. It is only fair, of course, to state that Mr. Pheysey personally did not agree with some of these practices?—No.

3363. And notwithstanding his very long experience he realises the great difficulties attending the whole question?—It is a very difficult question.

3364. And with great modesty he told us that he did not care to set himself up as a person who has a right to lay down the law in such matters. That is after an experience of 45 years?—Please do not imagine that I am anxious to lay down the law; it is a position that I was forced into.

3365. I should now like to turn to the literary evidence which you put forward. You gave a welcome relief to the proceedings the other day by quoting some passages from the Exciseman poet Burns. Your object was, I take it, to show that in the latter part of the eighteenth century whiskey was prepared in Scotland from malted barley only, with the aid of a pot still?—Yes.

3366. I am sorry to say anything about this pleasant episode, but since you have seriously brought forward Burns as a witness, it will be necessary to examine your deductions a little closely perhaps. I suppose we may all take it for granted that whiskey in the times of Burns must have been distilled from a pot still of some kind, since the forerunner of all the patent stills, invented, I believe, by a Frenchman named St. Marc, was not introduced into Great Britain until about 30 years after his death. I will ask you, are you sure that the whiskey of that day was prepared exclusively from malted barley, and that unmalted grain was not also used?—No, I have told you already that I believe unmalted grain was used somewhere about that time.

3367. But you brought forward the poet Burns as a witness in favour of malted barley being used for whiskey in those days?—Yes.

3368. We want to see, was malted barley used exclusively in those days, or was it mixed with unmalted grain?—I really was not alive at the time; I cannot say.

3369. The history of the thing is open to us all. The other day I was looking through a small collection of pamphlets, and I should like to ask you if you have seen them. They were printed in Edinburgh in the year 1785, on behalf of the Landed Interests of Scotland?—No, I have not seen them.

3370. There is one on the Distillery, containing at page 78, the following passage—this is in 1785: "He" (that is the distiller in 1785) "mixes a certain proportion of the best malt with the meal of blacked or damaged wheat or barley, or with the meal of barley of inferior quality, or with the meal of rye; in short, his greatest consumption consists of damaged grain, or grain of inferior quality"?—Surely, I do not think anyone maintains that a mixture prepared from damaged grain is whiskey. I do not think that would be seriously contended by anyone.

3371. There was only one spirit produced in Scotland in those days?—Most Scotchmen would not have touched that.

3372. I am bringing this forward merely as a proof that there was unmalted grain used in those days. (*Chairman.*) That, I should think, is a special case, because we know that no damaged grain, or grain that is rotten, is used by distillers, but all the distillers that have come before us said such grain was never used for preparing spirit as a potable spirit.

3373. (*Dr. Horace T. Brown.*) Did you ever hear of a Report of the Select Committee of the House of Commons which sat in the years 1798 and 1799 to consider the state of the laws relative to distillation of spirits in Scotland?—No, I did not.

3374. I have it here. It is a very voluminous Report, consisting of about 1,000 pages of evidence, and it contains a great deal of interesting information about the methods of the Scotch distillers of whiskey in those days. That is only three years after

the death of Robert Burns. There are numerous passages in this Report which show that raw unmalted grain was used by the Lowland distillers. If you will allow me, I will quote one only from page 349. This Report is extremely interesting in many ways. It contains a vast amount of information, which I cannot say I have been able to digest at present, on the practice of distillers in Scotland at the latter part of the eighteenth century. Here is the passage at page 349 of the Report. It runs as follows: "Those in the Lowlands of Scotland who are called the great distillers, have learned their business from the English, and copy them in their method of manufacture. They use a mixture of malted and unmalted grain, of which the greater proportion is unmalted." Then there is also a series of tables given showing that 14 out of 30 Lowland distilleries in 1799 used unmalted grain. Do you not think that this, to some extent, disposes of your contention that the whiskey whose praises the poet Burns sang was whiskey exclusively derived from malt?—He was probably singing the praises of that spirit.

3375. Of the malt spirit?—Yes.

3376. He was in a Lowland distillery, you must remember, in Dumfries?—Perhaps they did not like the raw grain known.

3377. There is another point in connection with this quotation from Burns you have given us. Can you inform the Commission as to what is meant by "Scots Bere"?—Two glossaries I looked up gave the term "bere" as barley.

3378. Yes, as barley, but do not you know what kind of barley it is? It is a sort which differs from the barley which is mainly used in Scotland now?—No.

3379. You do not know that the old Scotch bere or bigg is a six rowed barley?—No.

3380. So different in its quality, and general appearance, from the modern two rowed barley that the botanist Linnæus made two species of them. That is the two rowed barley, and that is the six rowed barley. Would you like to see them?—I should like to see them.

3381. Are you aware that the composition of the worts from the bere or six rowed barley is different in some respects from that of the worts made with the modern two rowed barleys?—No, I have not had any opportunity of trying that.

3382. I suppose you will admit that the composition of the worts influences to a very large extent the spirit distilled from it?—In which way?

3383. That if you have two worts prepared with very different materials, and having necessarily a difference of composition, the spirits which will be distilled from those two worts will have certain differences?—Yes, provided the things are different in flavour, and so on.

3384. Does it not follow that the whiskey made from the bere, or six rowed barley, the whiskey referred to by Burns when he was gauging in the Distillery at Dumfries, must have been somewhat different from the Lowland whiskey of the present day?—If you will allow me my recollection just enables me to remember that Burns, in that same poem, refers to the grain as "John Barleycorn." I fancy that he meant barley, whether the term "beare" is used in a different way, or not.

3385. I am coming presently to an interesting quotation from that Report. I suppose, however, you are not such a downright purist and upholder of ancient methods that you would desire on the authority of your Burns quotations to compel modern distillers to use bere instead of the two rowed Chevalier barley?—No.

3386. The Chairman wishes me to read a paragraph here. It is on page 201 of the 1799 Report of the Select Committee. It is a note attached to a Table giving the amount of spirits produced, and the materials from which those spirits were derived. It is under "Grain used." "This part of the Account could commence only at the 10th August last, when the Duty on Raw Grain, and the officers' right to take account of it, and of the malt used before ground down, took effect. Raw grain appears to have been used by 14 distillers only, and except by one of them in very inconsiderable quantities, which gives reason to suspect that a full account has not been got by the officers, and that much raw grain may have been used without duty by mixing it with the malted grain, instances of which have in fact been discovered, but it is very difficult, if not impossible, to distinguish the one from the other after being ground down, or mashed." If any other evidence were required to show that unmalted as well as malted grain was used in the time of Burns is it not shown by this passage from the 1798 Report of the Select Committee? It is on page 4, and it runs as follows:—"The corn spirits manufactured in Scotland are made either from malted barley or bere, called also bigg, which is a grain of the same nature, but inferior in quality to barley"?—"The same nature."

3387. "Or from a mixture of such malt, and of barley, or bere, raw, or unmalted." And then in a foot note on the same page there is this statement:—"Wheat has been sometimes used by Scotch Distillers, but it is believed not of late years on account of the high price of that grain." As you have cited the poet in evidence that the pot still was used in his days, I should like to ask you if you know anything about the great controversy which went on in Scotland in the latter part of the 18th century as to the particular form of still which should be allowed?—Do you mean an Excise controversy?

3388. It was considerably more than that. You will find a full account of this great war of the stills in the Parliamentary Reports of 1798 and 1799, and it appears to have some points in common with the controversy between the pot and patent distillers of the present day. It is impossible by making a few quotations to bring the whole thing together, but if the Chairman will allow me I will summarise the main points in a few words?—I think my recollection is that the controversy there was this: The duty was levied on the stills, and the point was to try and make a still that would distil as rapidly as possible so that they could get less duty per gallon of spirit. Is that it?

3389. That was to some extent the question?—I was aware of that.

3390. But that is not quite the whole of it. Prior to 1786 the duty in Scotland was levied on the amount of wash, and the yield of spirit, but in that year the system was altered by imposing an annual licence on the distiller based on the capacity of the still, and on the assumption that it could not be discharged more than about four times a week. These new regulations stimulated the progressive distillers in the Lowlands to alter and improve the mechanical arrangements of their stills, in the direction of increasing their capacity, and increasing the rapidity of their discharge. This, of course, led to a constantly progressive increase in the Revenue charges for licences, which, however, did not by any means keep pace with the increasing ingenuity of the Lowland distillers. The alterations in the stills mainly consisted in reducing the capacity and depth, the depth being finally reduced to a very few inches?—Yes.

3391. Figures of these two forms of still are given at page 252 of the 1798 Report. By this arrangement the still which formerly could only be discharged four times a week was so far improved that in its later forms it could be filled and discharged in eight minutes. The result was that the Lowland distillers effected such savings, even with a constantly increasing licence, that they were enabled to put their spirits on the market at a very low price, and to undersell, even in their own district, the Highland distillers, who were less progressive, and were also under a different set of Excise restrictions. The Highland manufacturers who adhered to the old processes of slow distillation in the old-fashioned pot still bitterly attacked the Lowlanders for using the new-fangled still on the grounds that they produced spirits at a much cheaper rate, and that these spirits were not the real article, inasmuch as the rapid Highland process brought over into the spirit more of what we should now call the bye-products. In consequence of this the Highlanders asserted that the Lowland spirits were much more injurious to the health of the consumer than those produced by their own slow process in the old stills from malt alone. Do you not think that in this fight between the big pot stills and the little pots there is an instructive parallel with the pot and patent still controversy of to-day?—No.

3392. And that the main difference appears to be that the old-fashioned distillers of those days found

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fault with the progressive small pot men for leaving too much of the bye-products in the whiskey, whilst today it is the other way about?—No, I do not agree with that at all.

3393. You think there is no parallel there?—Absolutely none.

3394. It struck me there was. You would like, I expect, to see this?—Thank you, it is very interesting.

3395. The literature of whiskey is a pretty extensive one, and I suppose you have made yourself thoroughly conversant with the papers, especially the scientific papers, on the subject, and have not confined yourself to those you have mentioned in your *précis*?—I did read some others.

3396. You mentioned that all witnesses examined before the Select Committee of 1890-91 stated or admitted, or at all events no witness denied, that the word whiskey was applicable to the spirit from the pot still?—Yes, I think I am right there.

3397. I suppose you do not mean exclusively applicable?—Oh, no.

3398. So that the statement really amounts to this, that the spirit from the pot still is whiskey?—Yes.

3399. But, after all, the point is not whether it is whiskey so much as whether it is exclusively whiskey?—Yes.

3400. You say that you have not come across any evidence to show how or when, if ever, the term whiskey was permitted to be applied to patent still products?—Yes.

3401. This sentence is a little obscure, I think, and I must ask your help to straighten it out so as to get at your exact meaning?—Certainly.

3402. Does it mean that whilst admitting that patent still spirit has been known as whiskey, you cannot trace how or when permission was given to designate it as such, or even if such permission were ever given?—It means that I am quite unaware as to what right the patent still men have acquired at any time to call their totally different product by the name of a well-known product.

3403. Yes, but it rather admits, does it not, that this spirit had been known as whiskey?—It had been sold as whiskey.

3404. I wanted to be quite sure exactly what your meaning was. Permission by whom?—By anybody.

3405. I do not quite understand the word permission there. Where would you expect them to obtain permission?—I should have expected it from the Excise, because the other stuff was known to the Excise at one time as whiskey.

3406. Is it not the contention of the patent still men that patent still spirit and blends of patent and pot have been known as whiskey for a great number of years?—Yes. The answer is that milk and water was sold as milk for a great number of years until the year 1875; it was known as milk, and sold as milk, and bought as milk.

3407. Do you remember the evidence of Mr. James Wilson before the Select Committee of 1890-91?—I have no doubt I have read it.

3408. The gentleman who represented twenty-five wholesale houses in Belfast. If you have the report it is question 3457. He says: "In Ireland patent still has always been whiskey since the patent still was started." That is correct, is it not?—Yes, that is practically right.

3409. Then you claim Sir Algernon West as having been on your side in that Committee?—Yes. I think I gave you the references to that.

3410. Yes. In answer to question 41, to which you referred, Sir Algernon West said: There is, as you know well, no legal definition of whiskey, but, broadly speaking, it is made from malt or malt and grain, and is distilled in pot stills. That is what we usually accept as the definition of whiskey, but the term whiskey is also applied to spirits distilled in 'Coffey,' or patent stills." He does not say there "misapplied"?—No, but he does previously. He cannot be saying it every two minutes. He has given his own definition.

3411. That is the quotation you gave us, question 41, is it not?—41 and 48.

3412. That is 41?—The whole of his evidence is really as I have stated I think. If you read it carefully you will find it is entirely in my favour.

3413. I rather question that. You have also referred to the evidence of Mr. Molyneux, that whiskey ought to be a pot still product, and you have quoted 348, 349, 350 and 355. Will you refer to 420 and 421?—I have 420, yes.

3414. Do you not think that those replies indicate that what Mr. Molyneux had specially in his mind when he recommended certain restrictions with regard to blending referred to German spirit or foreign spirit generally rather than to British patent spirit?—You mean question 420: "Now with your large experience can you suggest a means by which Parliament can be assisted to a conclusion in preventing a fraud of that kind?"—I cannot see what the fraud is.

3415. That is a question of Mr. Healy's. Would you kindly go on reading that?—Yes, but what is the fraud he is referring to?

3416. The blending of pot and patent, I take it?—That is what I took it, but I thought you maintained it was pot and German spirit.

3417. Will you kindly finish that?—"I think that if you oblige retailers to label their bottles with the information that the spirit is sold as a blended spirit, as a mixture of whiskey and alcohol, possibly you might to some extent check the practice, or you might have a board put up in the shop with an announcement upon it that 'all the spirit sold in this place is composed of German spirit and Scotch whiskey mixed together.'"

3418. "'German spirit.'" That is the point. Now will you take the next one, 421?—But I think that we ought to see what he was really referring to in the question.

3419. It is very difficult to make out in some of these cases whether they are referring to British spirit or to German spirit?—There is very little difference analytically or in flavour.

3420. Then you referred to Dr. Bell's evidence, giving certain quotations from it?—Do you want question 421 of Mr. Molyneux's evidence read?

3421. If it is on the point?—You asked me for it just now. "If you took a precaution of that kind in the interest of the general retail consumer, do you not think that the moment the retailer would look and see what he was doing, and would not at all be likely to put up in his shop a statement that he was selling blended spirit." Then the answer is: "Seeing that the law once obliged them to keep foreign spirits and British spirits in separate rooms, and prohibited the mixing of these spirits under any circumstances before delivering them to the public, and seeing that that law was repealed, I suppose it was then thought that the best way was to let the customer be the judge of the material he was buying. By the Act 6 George IV., chapter 80, it was provided that foreign and British spirits should not be mixed together, and that they should be kept in separate rooms."

3422. Do you not think he is speaking mainly of German spirit rather than British patent still spirit there? I ask for information?—I do not think that Mr. Healy was very keen on German spirit. He was probably in favour of having genuine Irish whiskey, I should think. Look for instance at question 415. "Do not you think that the law ought to enable a man who wants a malt spirit to get it, and that a man who wants this alleged superior article at 10d. a gallon ought to be able to get it at that price?" That is the question of Mr. Healy, and he is obviously referring to blends in general.

3423. 412 refers more specifically to German or silent spirit. It is very doubtful I admit. Then in Dr. Bell's evidence there are some questions I should like you to refer to 1134, 1135, 1136. It appears to me that in answering these questions Dr. Bell again had in his mind German spirit rather than British spirit?—Obviously in question 1134 the question is about German spirit. Also in 1135 the question is about German spirit.

3424. Then 1136 is another. He certainly refers to German spirit?—Yes, the question in each case is about German spirit. It is mentioned in the question.

3425. I do not think he has sufficiently differentiated those two things in his replies. It is very diffi-

cult to make it out clearly. Then you quoted Mr. Cobden Samuel's case, and I think the quotations you made, as far as they go, are certainly in your favour. But here again, are you quite sure that the witness is referring to British patent still product?—I think so. I have had no doubt about it.

3426. I ask you this because I notice in his answer to question 1422 Mr. Cobden Samuel, who was the Analyst Principal of the Customs Laboratory, says that he never had experience with British patent still spirit and highly rectified spirits, but he has no reason to doubt that they are practically identical with foreign plain spirits. That seems to imply that all the questions put to Mr. Cobden Samuel were replied to under the impression that he was speaking of foreign spirits.

3427. I think he defends whiskey, does he not?—Did I not quote that?

3428. I do not want to labour that question too much, but I ask you for information. I was unable to make my mind up as to the exact meaning of some of these things, and as to whether they referred to British or German spirit?—I could look through it, and, of course, everybody could look through it.

3429. Mr. Cobden Samuel was a Customs man, and he would know nothing about the Excise. He would only have to deal with foreign spirit?—As a matter of introduction into the country, but whiskey would never be introduced into the country.

3430. You have brought forward Mr. Cobden Samuel's evidence as being in your favour, and referred to his opinion about patent still spirit, but I want to point out that he is only speaking, and could only speak, from his experience of foreign spirit, and that all his answers must have referred to foreign, and not to British-made spirit?—That question you refer to rather looks like it, but I do not see why he could not buy English patent still just as he could buy Scotch whiskey.

3431. But that would not come under his ken as a Customs man?—No, but whiskey would not. You might rule him out altogether, because no whiskey is imported.

3432. I think we might on that question. Now do you yourself think there is practically no difference between ordinary British patent still spirit and imported foreign patent still spirit?—I have never examined any foreign patent still spirit, so I cannot say.

3433. But when you look at those analyses that were given at 3571 and 3574, where you have got analyses of the British and patent still spirits, do you not think there is a very great difference in the composition of those? First of all, take 3571 and 3574, and then 3632. 3632 refers to foreign spirits?—Would you point out the point you wish to make?

3434. The point I want to make is this, that you say there is no material difference between ordinary British patent still spirit and the imported foreign patent still spirit?—No, I said nothing of the kind. I said I had not examined the foreign imported spirit, so I could not reply from my own knowledge.

3435. I beg your pardon, I misunderstood you. Then you cannot give an opinion on it?—No, I could quote to you the French Alcool d'Industrie which is somewhat purer than British patent still spirit, but I have not examined them myself. It is slightly more refined I should say.

3436. Then you have also put in the evidence of the late Mr. A. H. Allen, and looking at his evidence as a whole I certainly think it is fairly in accord with your ideas. But there is this difference between you as shown in questions 1790 and 1862 that Mr. Allen would have allowed the sale of patent still spirit as whiskey provided it was described as patent still whiskey. You, on the other hand, would not allow it to be described as whiskey at all?—I do not think it should be, but of course that is not my business at all. As an analyst I have to find out whether the thing is of the nature, substance and quality of the article demanded, and only indirectly am I forced into making definitions.

3436*a*. Notwithstanding these examples of the evidence given before the Select Committee of 1890-91, it is a fact, is it not, that the Report of the Select Committee was against any legal definition of whiskey?—Yes. I did not know you were going to examine me on this or else there are one or two things I should have liked to draw your attentioin to. I do not think I can find them now.

3437. I think Mr. Bramall told us that he regards this Report as biassed?—I was not present when Mr. Bramall was giving his evidence, and I have not seen any proof of it, so I do not know what he said; but there was a good deal in this Report to show they did appreciate the difference between the two styles of spirits. I have not examined it thoroughly, but if you refer to page x. of the Report, I think you will find there, about ten lines down: "Under Section 6 of the first Food and Drugs Act, a sale is illegal if the purchaser be prejudiced by buying 'any article of food or any drug which is not of the nature, substance, and quality of the article demanded by the purchaser.' Under this section a vendor selling as malt whiskey spirits containing none of the bye-products of malt, or of malt and grain, could be detected in the present state of chemical knowledge, if the malt spirit had been made in a pot still. So far the present law applies. But your Committee are unable to recommend any standard of purity or impurity which could guide such conviction." They evidently think that some conviction ought to take place, but they decline to make a standard.

3438. We now come in your literary evidence to the article on spirits in the "Encyclopædia Britannica," which was published in 1902, from which you have made numerous quotations. That article was, I believe, written by Dr. Schidrowitz, was it not?—I understand so.

3439. Dr. Schidrowitz is well known, is he not, as an original worker in the chemistry of distillation?—I believe he has given a good deal of time to spirits.

3440. And has written a large number of papers on the subject since the appearance of that article?—Yes, I think they were written since the appearance of that article. I think there were two papers read before the Society of Chemical Industries.

3441. You are, I suppose, fully conversant with all his papers?—I have not read any of his papers published since the North London case.

3442. In his writings since 1902 describing his own work, has Dr. Schidrowitz considerably modified his views expressed in the passages you quoted from the "Encyclopædia Britannica"?—I think he has lately, but I could not put my finger upon it. I might point out that he was in Court throughout the North London case, but he was not called to contradict any one of my statements.

3443. You do not imply, I suppose, that his changes of opinion on a matter of this kind have been influenced by the case?—I do not know that he has changed his opinions first of all.

3444. Have you read his papers?—Not since 1904.

3445. Did you read a paper of the 15th June, 1905, which was given before the Society of Chemical Industries, that is to say, five months before the first hearing of the whiskey case?—I think I read that one.

3446. That is a very important paper. I find on page 8 of the reprint of that paper there is the following passage: "It must, however, not be assumed that the use of peat alone is responsible for all the characteristics of Scotch whiskey, for the Lowland malts, in the preparation of which little and sometimes no peat is employed, and the grain whiskies which are made without peat, yet unmistakably possess those characteristics of flavours which are associated with the article in question"?—Have you the context to show what he means by "grain whiskies" at that period?

3447. There is another passage on page 8, "The grain whiskies are distilled in a still designed for partial rectification"?—Then he means patent still.

3448. Yes—"but as will be seen from the figures below they are far removed from being silent spirits, and as we have already stated they possess very considerable whiskey flavour." That was in 1905. Then again in 1906 there is a paper read before the Institute of Brewing. I suppose you have read that?—No, I have not.

3449. It is a very important paper also. In that there is the following passage: "Since the days of Coffey innumerable other rectifying stills have been designed, and many of these are in use principally on

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the Continent, but the object of these is almost invariably the production of a spirit of high strength and of as neutral a character as possible. For the manufacture of a particular type of spirit long known as grain whiskey, that is to say a spirit which stands in an intermediate position between the heavily flavoured pot still whiskies on the one hand and neutral or rectified spirits, that is plain alcohol, on the other hand, Coffey's apparatus still holds the field." After these quotations and others which I could give you, do you think you can fairly claim Dr. Schidrowitz as supporting your views?—I believe he is here to speak for himself, and I would rather he did.

3450. You have quoted very largely from his article in the Encyclopædia Britannica?—Pardon me, if you will allow me to make that quite clear. You were asking me the knowledge on which this prosecution was founded, and that article in the Encyclopædia Britannica was in existence before the prosecution started.

3451. But this is in the *précis* of your evidence?—Yes, I put it there.

3452. You bring forward Dr. Schidrowitz's article in the Encyclopædia Britannica of 1902 as evidence in your favour, but you entirely ignore the subsequent writings of the same author?—I think you will find my object in putting forward all these things from the poet Burns to Dr. Schidrowitz was to show the state of mind when we started the prosecution.

3453. I believe it is your contention that one essential difference between the process of distillation in the pot and patent still is that with the pot still all the volatile products come over with the spirit and are to be found in the finished whiskey?—Yes.

3454. Are we quite clear on that point?—Yes. Of course when I say all I mean practically all.

3455. You mean by this that pot distillation is in no sense of the word a fractionating process?—Yes.

3456. That the quantitative relation of the bye-products to the alcohol in the fermented wash is the same in the wash as it is in the whiskey?—Practically all. There are certain changes.

3457. But the relation, that is the relation of bye-products, the quantitative relation of bye-products, to the spirits in both cases is the same?—Practically the same.

3458. It is just this point that I cannot understand, and to simplify matters it will be more convenient if we consider the somewhat simpler Scotch method of two distillations rather than the Irish method of three?—The Irish method is very complicated. It is not exactly three distillations, but it is a mixture of three and two.

3459. I can get all the information I want from you on the simpler case. Supposing we start with the distillation of the wash. Can you tell us about what proportion of low wines you would have to distil off before the hydrometer indicated that the whole of the spirit had come over in the low wines?—I believe I have some notes that I made at a distillery on that subject, but I have always regarded them as more or less confidential; I have not got them in my head, and I have not got them here.

3460. I only want to know approximately what comes over. Is it one-third?—I should think fully one-third or more.

3461. In the fermented wash before distillation we have a mixture of volatile products varying, we will say, in boiling point from 70° F., that of acetic aldehyde, up to, we will say 275° or 280° F.—about that of amyl-alcohol, the boiling point of the ethylic alcohol being about 173°?—78° or 77° C.

3462. 173° F.?—I will accept your figure.

3463. For the purpose of argument we will assume that the temperature of the boiling wash at the close of the distillation is 212°. It would be rather higher than that?—Naturally.

3464. There can be no doubt, of course, that all the volatile bodies having a lower boiling point than the ethylic alcohol would come over into the low wines, and a certain amount of the higher alcohols boiling above 212° would also come over with the water, vapour and alcohol?—Yes.

3465. The first point I will ask you is this: does the spent wash, at the moment of its discharge from the still, contain any appreciable amount of higher alcohols?—I failed to find it. I examined both spent wash and spent lees. In one (I forget which now) I found a trace of higher alcohol, and in the other two cases I found none.

3466. In other words, supposing the distiller continued the distillation of the wash after the whole of the spirit had been collected in the low wines receiver would he bring over any more of the higher alcohols and furfural and bodies of high boiling point?—I think they would be over already.

3467. Could you tell us how you prove the absence of the higher alcohols in the spent wash?—By distilling and trying it with sulphuric acid.

3468. How did you distil it? How long did you continue, and how long did you carry on your distillation? Did you distil in steam, or did you simply distil down some small batch and add water, and again distil? Is that how you did it?—I distilled, I think, nearly to dryness, and then tried with sulphuric acid; the same way one distils to get the higher alcohols and the spirit.

3469. (*Dr. Adeney.*) What did you try with sulphuric acid—the distillate?—Yes.

3470. (*Dr. Horace T. Brown.*) You did not continue the distillation more than once, you ran it down to dryness, or nearly to dryness?—I think that is what I did. I made to 50 per cent. strength of alcohol.

3471. You say you found there the higher alcohols in the wash after treatment of that sort?—I forget whether it was the wash or the spent lees. I had my notes last time, but I have not got them to-day.

3472. We are talking of the wash at the present moment?—There was practically none there. It does not smell of amyl-alcohol at all.

3473. What would you expect to be a trace? Would you expect ·01 per cent., or anything of that kind, to be a trace? You are dealing with a large volume of distillate?—I am sorry I have not my book here or I could give you actual figures, but it is something very remote.

3474. You could not give any estimate of what amount you found in the spent wash?—I could give you the actual figure this afternoon. I can telephone for it.

3475. You know, I suppose, that Dr. Schidrowitz has carried on some experiments of this kind?—No, I did not know that.

3476. Now let us take the distillation of the low wines. You say that practically the whole of the higher alcohols and of the bye-products would come over into the low wines. Now take the distillation of those. You would seriously maintain that they contain as much of the higher alcohols as the original wash before distillation?—Referred to the standard of alcohol, you mean.

3477. Referred to the standard of alcohol or the volumes if the volumes are equal?—Of course, the volume would not be equal.

3478. No, but if they were equalised?—Yes, practically. I admit traces may be lost, but they are very small traces.

3479. The distiller, in distilling the low wines, rejects, in the first instance, the foreshotts which contain the volatile substances of low boiling point along with some alcohol?—Yes.

3480. Collects the intermediate portion as whiskey?—Yes.

3481. And again rejects the last portion as feints?—Yes.

3482. Must not these last portions contain a larger portion of the less volatile bye-products than either the foreshotts or the whiskey?—I do not think it at all follows.

3483. Supposing you take a sample of those low wines into your laboratory and you distil them over the lamp in the ordinary way ——?—Without a rectifying column.

3484. Without a rectifying column, simply use your Liebig condenser, and you took over the first portions of the distillate, the intermediate and the last portions, would you expect those all to analyse to the same point as regards the bye-products?—There would not be a very great difference. I think I submitted some figures to you last time from some work on that. It is on page 228 of my evidence.

3485. Yes, I am coming to that?—That is my answer to your question.

3486. For my part I really cannot understand how any chemist could refuse to recognise this as a process of fractional distillation?—Boiling it off in the flask?

3487. Boiling it off in the flask and separating your various portions of the distillate. If it is not fractional distillation what is it?—There is very little fractional distillation by boiling off in that way if you have not a rectifying column.

3488. I know that some other members of the Commission will ask you some questions about this, and I will perhaps not pursue it now except that I should like to ask you a few questions about those figures which you put in on page 9 of your *précis*. In the analyses that you have given at page 9, "Feints, low wines and whiskies," may I ask if all these refer to the same distillation?—I do not think they did.

3489. Do you think they are of much value unless they did?—They are either the same distillation or within a day or two.

3490. I do not see how they are comparable unless they are from the same distillation?—Even if they were the same distillation I do not know that they are exactly comparable because if you go into a distillery like that you cannot take charge and take your samples as you want them. You cannot mix everything. You cannot "boss" the place. You have to take what you can get in the way of feints or strong wines, or a mixture of strong low wines and feints, and of course of the whiskey product.

3491. I notice that you have not given any analyses of the wash from which these distillates have been produced?—No. That I will telephone for this afternoon.

3492. Nor the relative volumes of the wash, the spent wash and the low wines and the feints which would be produced from it. There are no volumes given, so it is impossible to work your figures out in such a way as to show the exact amounts of the various bye-products in the original wash and to distribute these amongst the different portions of the distillate?—If you find that you have practically the same sort of figure for a finished whiskey as you have for a strong feint or strong low wine—of course my figures may not be worth anything, but as far as they go they show there is no loss.

3493. Taking your own figures as they stand in your table will you please refer to the numbers you give of the sum of the bye-products in (B), (C), (D), and (E), that is to say, in the strong low wnes, the strong low wines and strong feints and the whiskey. The strong low wines in (B) show 573 parts of total bye-products?—Yes.

3494. The mixture of strong low wines and feints in (C) shows 589 parts?—Yes.

3495. Whilst the whiskies (D) and (E) show respectively 455½ and 378·4?—Yes.

3496. Do not these figures, even on your own showing, prove that there has been a fractional separation in the process?—There is a certain difference there.

3497. See how high those numbers are in (B) and (C) as compared with (D) and (E). There must have been a considerable amount of fractionation there assuming that these are the same distillation?—I do not think they were.

3498. Then they can have no value at all?—That is for you to decide. I thought they had.

3499. Surely if these are not from the same distillations we cannot possibly say whether there has been a fractionation here or not?—No, but all I put these figures forward to show was that feints and strong low wines and whiskey, and so on, had roughly the same composition.

3500. I gather from your *précis*, and I read it very carefully, that these were put forward as evidence that there was no fractionation with a pot still. Do you know anything of an investigation which was made by Dr. Schidrowitz on this very point, and the result which he published in the Journal of the Institute of Brewing in 1906?—No.

3501. In those cases he gives the particulars of distillation by the Scotch method in which in the first place he measured the volumes of the original wash, foreshotts, whiskies, and feints in the same distillation, and determined the amounts of the various bye-products in each, and the net result which he got was that out of 100 parts of the volatile bye-products present in the original wash, 63 parts were directly eliminated, and 37 parts were retained in the distillates, and of those 37 parts only about one quarter passed into the whiskey. If you have not seen those results I think they are of interest?—I do not think they would interest me in the least. If I understand you only 37 per cent. of the bye-products appeared in the finished whiskey. Is that what you said?

3502. The net result was that out of 100 parts of the volatile bye-products present in the original wash 63 per cent. were directly eliminated and 37 per cent. were retained in the distillates, and of those 37 per cent., only about one quarter passed into the whiskey?—I could not accept it whoever stated it.

3503. Then you will not admit that by the ordinary distillation there is the least fractionation going on at all? You will not admit there is any fractionation in a pot still?—I should like you to take out the word "least." I admit there is a very small fractionation.

3504. Could you show us what that is?—No.

3505. Have you any figures which will show according to your ideas the amount of fractionation which can be produced in a pot still, or is ordinarily produced in a pot still?—No, I cannot. There is very little, that is all.

3506. Turning now to the patent still, you have told us that it is something more than a still, being also a rectifier or fractionating apparatus?—Yes.

3507. And you deny the fractionating power of the pot still?—The difference as you will understand is that one has all the fractionation, if any—in a pot still—by evaporation, which is a very weak fractionation, practically no fractionation, and the other in the patent still is a fractionation by condensation; that is a very powerful fractionation, but of course in one way the pot still is an admirable fractionating arrangement because it fractionates the whole of the spirit from the water that is left behind. But it does not fractionate to any extent these traces of bye-products.

3508. Do you mean that the relation of the bye-products to the alcohol is the same as it was in the original wash practically?—Yes, the volatile bye-products. I would not say acetic acid because that has a high boiling point.

3509. It would be very interesting to the Commission to have some experimental proof of this from your observations?—I am merely confirming the statements of Mr. Allen and Dr. Bell, and I have put forward certain analyses which show that they are approximately the same.

3510. Do you mean to say that Dr. Bell and Mr. Allen denied that the pot still was a fractionating apparatus?—Yes, most certainly.

3511. Specifically denied that it would produce any fractionation at all?—They did not put it like that. They said the finished spirit contained the whole of the bye-products.

3512. Can you give us references to that?—I can after lunch.

3513. One of your objections to the patent still is that the steam used hydrolyses the compound ethers—the esters. Is not that so?—Yes.

3514. You have mentioned that here?—Certainly.

3515. I suppose you do not mean to say that a pot still does not also to some extent hydrolyse these compound ethers?—Not nearly to the same extent.

3516. Again do you know Dr. Schidrowitz's experiments on that very point?—No.

3517. In which he shows that the pot still has a very marked influence in hydrolysing. You have not made any direct experiments on this question?—No. A friend of mine once tried to distil a compound ether with steam and that was fatal.

3518. You would not admit that the main difference between the action of the patent still and the pot still resolves itself into this, that in the patent still there is an elimination and a removal of some of the bye-products in a visible and tangible form as fusel oil?—No, it goes further than that.

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3519. Whilst in the pot still the accumulation of bye-products in the spirit is kept in check by chemical processes of oxidation and hydrolysis?—Oxidation in a pot still?

3520. Oxidation of the aldehydes and higher alcohols into their corresponding acids which are eliminated in the spent wash?—No, that is nonsense.

3521. You would not admit there was any oxidation of that sort going on?—No.

3522. I should like to thoroughly understand how you explain the fact that if there is no fractionation going on in the pot still these products which the distiller tries to keep out of his whiskey, foreshotts and feints, do not after a time accumulate in such a way that the distiller can get no whiskey at all unless at the same time there are some processes of destruction going on?—I think you are wrong, if you will pardon me putting it in that way, to assume that they do accumulate. The distiller goes on distilling; he starts with his low wines; taking the Scotch process he gets the whole of the alcohol from the wash into the low wines; he then distils the low wines, he gets his foreshotts, which are put aside, he gets his whiskey, which goes into consumption, he gets his feints, which are added to the foreshotts. These foreshotts and feints are added to the next low wines, and then you get the same quantity of feints and foreshotts out and the same quantity of whiskey to go to consumption.

3523. Are not your foreshotts and feints accumulating *ipso facto*?—No, I do not think so.

3524. What becomes of them? Supposing you start a distillation without the addition of any foreshotts, or without the addition of any feints of any kind, you get a certain amount of foreshotts and feints?—That particular whiskey would be below standard.

3525. Out of the next distillation of the next lot of wash there must be the same amount of foreshotts and the same amount of feints?—Yes. I always maintained that that shows that the whiskey must contain the same percentage of bye-products per 100,000 parts of alcohol as the low wines, because there is nothing eliminated.

3526. What would happen if to the intermediate whiskey the foreshotts and feints were added at once? What sort of a product would you get?—I have never tried it.

3527. You would not get a very drinkable product?—New whiskey is not very drinkable at any time.

3528. Why do you eliminate the foreshotts and feints if they are required in the whiskey?—I do not know why the distiller in pursuit of his art does certain things. It may be there are some very high boiling point things which we have not referred to at all which are eliminated.

3529. What I want you to see, if possible, is my inability to understand how it is that if you are rejecting foreshotts and feints in every distillation and putting them into the next distillation these do not accumulate unless there are some processes going on resulting in their destruction and elimination?—My answer is because the composition of whiskey is practically the same as the composition of low wines.

3530. I do not think your analyses show that?—Approximately I think they do.

3531. It seems to me to be contrary to the chemistry of the thing. I wish you could give us a little more definite proof of this statement, which is very important?—I can only do it by taking command of a distillery with power to take samples when and how I like. I have no such command.

3532. (*Dr. Adeney.*) Can you give us the alcoholic strengths of these strong feints and low wines?—Yes, I have not got them here. I think I could get those also.

3533. If you could I think they would be useful?—Yes.

3534. (*Dr. Horace T. Brown.*) I have no doubt there are other members of the Commission who have questions to ask you on those points. I now want to obtain some information from you about the analytical standards you have laid down in your official capacity for differentiating pot from patent still spirits. You told us, I think, that in your opinion no pot still whiskey has a coefficient of impurities less than 380?—Yes, perhaps it would be better to call it the sum of the bye-products.

3535. Yes. I am using the ordinary expression which we derive from the French. It is an unfortunate one, I admit?— It is unfortunate, because people think they are getting something very bad.

3536. We will call it the sum of the bye-products if you like?—Yes.

3537. The sum of the bye-products is not less than 380?—That is what I arrived at.

3538. That is to say, that no genuine pot still whiskey contains less than 380 parts of acids, aldehydes, compound ethers, and higher alcohols reckoned upon 100,000 parts of the contained alcohol?—Yes.

3539. I suppose before you laid down this standard you examined a number of samples?—Yes, I have given you the samples.

3540. These include all the samples you examined, do they?—Yes. I have examined others since, but you expressed a wish not to have those.

3541. You have done some since?—Yes. There were some in my *précis* which are cut out in the proof.

3542. (*Dr. Adeney.*) I think you misunderstood Dr. Brown.

3542*a*. (*Dr. Horace T. Brown.*) I certainly did not wish you to cut anything out.

3543. (*Dr. Adeney.*) I think Dr. Brown asked you what were the analyses you based your standard upon?—Yes. Then there were some later, after the trial. There was a Comber, an Irish whiskey, some American rye, and Bourbon whiskey, and some Cambus patent spirit.

3544. (*Dr. Horace T. Brown.*) I have been considering the matter entirely from your *précis* so that we may argue from that. That includes them all?—That includes them all, but there are a lot of others I have had since.

3545. Am I right in saying that as regards the pot still Scotch whiskies your analyses were confined to six Highland distilleries and one Lowland distillery, that is to say, to seven separate distilleries represented by 13 samples?—I should say six Highland and one Lowland.

3546. Those distilleries are represented by about 13 samples?—It is quite likely. I have not counted them.

3547. You examined none of the products of the Islays or Campbeltowns?—No.

3548. Now, with regard to the Irish pot distilleries. Am I right in saying there were five in number, represented by 24 samples in all?—Yes.

3549. Of the patent distilleries you examined, I believe, the product from two, one in Scotland and the other in Ireland?—Yes.

3550. These two patent still distilleries were represented by four samples in all?—I examined other patent spirits which were supplied to me by a man in the trade, who did not give me the name of the distillery. There were certain patent samples from unknown distilleries given.

3551. You have the North British and the Dublin Distillery Companies here?—In the tables themselves you will find seven patent spirits from unknown sources.

3552. At what page is that?—Page 21, at the bottom, and the first half of page 22.

3553. We are told there are 22 patent distilleries in Scotland and Ireland, so you have examined the products of about 10 per cent. if we confine ourselves to the authenticated samples?—Yes. Are you asking me now as to my present knowledge, or my then knowledge?

3554. I was rather referring to your knowledge at the time you made your standard of 380. If you have seen any reason to alter that standard we should be very glad to hear from you about it?—No, I have no reason to alter it.

3555. Do you not think on the whole that these are somewhat meagre data on which to found an important standard of this kind?—My subsequent experience has told me that if anything it is rather low, and not high.

3556. Will you tell us the extreme values which you found for the co-efficients of pot and patent spirits respectively?—I think the highest is on page 21: "Scotch whiskey 11 years old, 646·6," and the lowest, I think, was 378—that is either the Lowland malt or one of the Irish.

3557. I think you stated in your evidence in Court it was the Irish?—It is on page 17 (A) of the *précis*, reference No. 1. "New whiskey—378·4."

3558. Now will you tell us about the patent stills, and what your limits were there? I think you said from 89 to 204 in your evidence in the police court? —Something of that kind. They are the same figures.

3559. You adhere to that?—Yes, that is a six-year-old patent still—204. It is reference No. 32 on page 22.

3560. 203·8?—Yes.

3561. I do not propose to question you on the details of the method of analysis you adopted. I know you will be examined on this point by another member of the Commission, but briefly put, I suppose I may take it that your method is the colorimetric one —the colorimetric of Girard and Cuniasse?—Yes.

3562. And that you would use as your control isobutyl alcohol?—That is so.

3563. Can you tell us what relations your values would bear to a similar method if you took amyl-alcohol as the control instead of isobutyl?—I have never compared the two.

3564. You could not give us any factor by which the one series of observations could be converted into the other?—No. I fancy Dr. Schidrowitz gives the factor somewhere.

3565. But you know that a factor of the sort has been given by Girard and Cuniasse?—No, I did not know that.

3566. I looked it up the other day. It is a ratio of 6 to 10. Would you be prepared to accept that factor for the purpose of converting one set of observations into the other?—I should like to try it myself first.

3567. You see the point is this, there have been a great number of analyses of whiskey published in which the amyl control was used (we will put the Allen-Marquardt out of it altogether) and it is very desirable for the Commission to have the means of linking up all these analyses with your own?—Yes.

3568. You know, I suppose, the paper by Dr. Schidrowitz in the June number of the Journal of the Society of Chemical Industry?—That is 1905.

3569. That contains the analyses of 100 samples of Scotch pot and patent still whiskies taken from 57 different Scotch distilleries. Now I was desirous if possible of linking up those analyses with your own, because, of course, your own are smaller in number?—Yes, about half the number.

3570. Would you be prepared to take any factor? Dr. Schidrowitz said the factor was about 2·5, and Girard and Cuniasse put it at 1·66?—In the absence of having tried it I could not accept either one factor or the other. You are in the same position with regard to that as I am.

3571. It is rather curious when one applies either Dr. Schidrowitz's factor or the factor of Girard and Cuniasse to see how all these analyses come out compared with your own. There is a complete overlapping of all the whiskies from the top to the bottom. I may put it in this way: suppose we take the 1·66 factor, which is more favourable to you than the other—considerably more?—You can take whichever you like, I do not mind.

3572. You would not accept it either way?—Please do not put it like that because I know nothing about it.

3573. It is much more in your favour to take that factor than the higher one of 2·5. Highland malts, taking that factor of 1·66, run from 286 to 705?—What does that apply to? Are you taking my figures.

3574. No, I am taking now Dr. Schidrowitz's figures of 76 Scotch whiskies, and I am trying to convert those figures into yours so that we can compare your figures with his. Using the 1·66 factor for conversion which is the one given by Girard and Cuniasse and which I say is more favourable to you than the other, I find that out of 39 Highland malts which are given by Dr. Schidrowitz they run from 286 to 705, and 10 of those would not have passed your standard of 380?—Then perhaps you had better take the other standard of 2·5.

3575. By the higher standard, which is much worse for you—31 would not have passed?—Pardon me, is not the amyl weaker than the other?

3576. We have to divide the highest figure, the amyl figure, by the factor in order to get the conversion?—I thought it was the other way about.

3577. Dr. Schidrowitz's figure for the amyl control is considerably higher than yours. You must either multiply yours by his factor, or divide his by yours? —You mean, multiply my results by the factor or divide Dr. Schidrowitz's results by the same factor in order to get a comparison.

(Adjourned for a short time.)

3578. (*Dr. Horace T. Brown.*) At the time of our adjournment I was asking you whether it might be possible by using any reduction factor to bring these analyses of Dr. Schidrowitz amounting to 76 in number, in line with your own, in order to ascertain how far these various samples came within the limit of 380. We were talking about the reduction factor of 1·66, which was the one recommended by Girard. I have had all those results recalculated, using that factor of 1·66?—That is of the higher alcohol only.

3579. Yes, and then I have added to those the other bye-products so as to get the co-efficient as far as possible on a line with your own?—Yes.

3580. It may be interesting to you to know how those came out. There were 39 Highland malt whiskies examined, and the reduced number came out between 286 and 705, and out of those 39 Highland malts 10 of them are below your standard of 380?—Yes.

3581. Then if we go on to the 16 Lowland malt, working them in the same way they run from 182 to 586 in the coefficients, and seven of those 16 would be below the standard of 380. In the Campbeltowns, 16 of those work out between 331 and 841, and two of those would fail to pass your standard of 380, whereas the five Islays corrected in the same way run from 457 to 575, so that all would have passed your standard. The point is, of course, that taking these as a whole, there is a considerable overlapping with your patent still co-efficients, which run from 89 to 204?—You will pardon me but am I expected to give an opinion on these statements?

3582. I should like to ask you ultimately what your opinion is with regard to them. The Lowland malts commence at 182, which is within the limits of your patent still products, which run from 89 to 204. Looking at these results as a whole there is considerable overlapping, and I should like to know where you would draw the line in a large number of analyses of this kind so as to bring all these genuine malt whiskies within your standard of 380. Of course, I am aware without the figure before you we are asking you a difficult question?—Of course I am not responsible for Dr. Schidrowitz's analyses. You understand that?

3583. Perfectly?—I am not acquainted with the actual details of his process. I am aware that he used amyl instead of isobutyl. I do not know whether he reduced to one standard alcoholic strength before heating with sulphuric acid.

3584. I think, as far as I gather from the account given in the published paper, the process was identical with yours with the exception that he used a control of amyl-alcohol, whereas you used a control of isobutyl alcohol. I think in all other respects the two processes are similar?—Yes. Otherwise supposing we accept these analyses absolutely, it merely shows that my suggested standard is a little too high.

3585. Exactly?—That is all it proves.

3586. It also shows more than that, does it not, if you accept these figures, and also at the same time accept your own limits for the patent still spirit. It would be impossible to draw a distinct line by any standard across these two sets of experiments in such a way as to exclude on the one hand the patent still without excluding some of the pot still?—It means this, that by accepting those figures—I do not say I do accept them, I do not know anything about them;

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I was not present when they were taken. I do not know where the things came from, or anything about them—but accepting them absolutely, it merely shows that we should be able merely to detect some frauds instead of all frauds.

3587. For instance, if a Lowland malt were sent to you which gives by your process 182, you would not pass that as a genuine pot still whiskey?—No, I should not. I should like to know a great deal about it. I may mention for the information of the Commission that I was told by a friend of mine in the Highlands that my standard was too high. and I said, "Well, in what case?" He mentioned a particular distillery; I said: "Send me some samples; if my standard is too high it must be altered." I got these samples, and they were distinctly below my standard. It had been declared to be a pure pot still whiskey, but on investigation it was found the still had a highly complicated fractionating arrangement in the head, and, of course, my standard was not intended to apply to such cases.

3588. Was that the case referred to in the Police Court when three samples were sent to you?—No.

3589. Can you give us any information about that?—No, the thing was a 'plant,' and I refuse to discuss it. It either means that I made a mistake, or else the thing was a trick.

3590. I thought on looking over those figures they showed one thing, at any rate: that your method of analysis would give fairly concordant results with the same samples?—Yes, that is possible. I have forgotten even the figures.

3591. The co-efficient was a very low one in that case; I think as low as 277, or something of that sort?—I think it was 313, speaking from recollection. It is somewhere in the evidence.

3592. Yes, I think I have it here; it is 277?—I do not know anything about the history of that.

3593. You think the upshot of it all is this: it merely shows that your standard is rather too high?—I mean, if we accept those figures.

3594. Do you think any standard could be laid down which would not be open to the danger that it may condemn a pure pot still whiskey?—There would be no danger of that, because if I in my ignorance were to condemn a pure pot still whiskey it would be open to the defence to prove up to the hilt that it was a pure pot still whiskey. The analyst would be the only man who would suffer in that case.

3595. It would be dangerous to found a prosecution entirely on your standard?—Personally, I do not think it would. Supposing I had been wrong in these prosecutions at Islington, I should have been talked to pretty considerably by my local authority, and my reputation would have undoubtedly suffered; but if the defence were in a position to prove that these things were pot still whiskey they could have proved it.

3596. Do you think, further, that your method, assuming that you have a standard, could detect the existence, we will say of 40 or 50 per cent. of patent still spirit, after blending with pot still?—I see what you are driving at. It is a mere question of arithmetic. If I took the highest Highland malt, with the greatest amount of bye-product and mixed it with 50 per cent. of patent still spirit with the greatest amount of bye-product that the mean might come within 380—that is a mere question of arithmetic.

3597. That was not so much in my mind as this: What is the limit of accuracy of your method in determining blends of patent and pot still spirit?—That I cannot say.

3598. You could only judge by experiments: you could only give your opinion on experiments?—I think as a rule you could detect 25 per cent.

3599. You could detect 25 per cent. of patent spirit?—I think so. You see it is a mere question of arithmetic. If the original pot still spirit was actually 380, and that was mixed with 5 per cent. of patent still spirit, you could probably detect it, but if the original pot still spirit was 500 or 550, or something of that kind, not absolutely out of the way numbers, you would not be able to detect 10 or even 20 per cent.

3600. But where you have a variation, we will say of the co-efficient in pot still whiskey running from something like 280 to 500 or 600 ——?—380 you mean.

3601. No, from 286, according to these figures I have here, those that we have been discussing, the Lowland malt, or 182?—You are taking Dr. Schidrowitz's figures.

3602. Perhaps it would be fairer to take your own figure of 380 as the lowest coefficient of a pot still whiskey. Assuming you had a certain proportion of highly flavoured whiskey mixed with the patent spirit you would not know whether it was Islay, Campbeltown, or Highland?—Not in my present state of knowledge. Some years ago one was supposed to be able to detect adulteration in butter, by a melting point determination. That very soon fell to the ground because the adulterators arranged that their production should have the correct melting point. Later on a test which was very much in favour with chemists was the Koettstorper test, the determination of the saponification value of the fat. That was an excellent test, but at the same time it can be dodged by an adulterator who can make a fat containing no butter whatever which will give the correct Koettstorper figures. We are now using a test known as the Reichert test, but that is beginning to be dodged. The adulterator always takes the measure of the analyst's foot as nearly as he can, and arranges a product to meet the tests which he knows are in use. It would be highly objectionable to lay down any method for whiskey analysis.

3603. You do not depend entirely on your co-efficient?—At present I am bound to, but I hope in time, if I am doomed to go on analysing whiskey, that other methods will be found.

3604. You have not referred in your *précis* to the question of the furfural as an indicator. Do you regard that as a valuable indicator?—I regard the absence of it as a valuable indicator of the absence of pot still spirit, but in genuine pot still it varies, say from one to five per 100,000 parts roughly, so that it would not be a good indicator for determining the percentage of admixture.

3605. You mean the proportion of the furfural is far too small?—No, I do not mean that, but if you look at my list you will find some genuine highly-prized whiskies containing only one part per 100,000 of the furfural. Take distillery C, I think it is. There are a series there where the furfural varies between 1·4 and 1·9; that is a very highly-prized Irish whiskey, but if you take distillery B the furfural there varies from 3·6 to 5·3.

3606. I suppose there is a considerable error of determination in furfural is there not?—Not very great I think.

3607. Then you would only take that as a rough indicator in the first instance? You mean if you find no furfural you would be pretty certain that you have no pot still?—Yes.

3608. You mean to say no patent still spirit contains furfural?—Some patent still stuff does contain traces. I will refer to my figures. Mine go up from a trace to ·6, that is to say from nil to ·6.

3609. Those results correspond fairly well with those given by Dr. Schidrowitz. He makes his grains run from 0 to ·9?—That is rather higher than mine.

3610. To go to another subject, you have handed in here a table giving the price per quarter of a number of cereals and the weight per quarter in pounds. I am afraid that information in itself does not give us much guidance. Can you give us any idea of the number of proof gallons which, say, 1 cwt. of each of these materials would yield and consequently the actual cost of materials only of a proof gallon of spirit derived from each kind of grain?—I have not worked that out, but I think you have that in the evidence of the Excise witness. I happened to be in the room when it was given on the opening day.

3611. You admit this is not much of a guide to us as it stands?—That is so.

3612. I have only a few points more of a general character to ask you about. Assuming that your definitions of whiskey are accepted, and become legally binding on the manufacturers, is it not the very first time that any manufacturer has been restricted in his choice of alternative materials for making a certain article and of alternative processes and apparatus for producing it?—I should not think so.

3613. I should be very glad if you could give us some information on that point?—It is rather a new point. I cannot think of every instance in the world for the moment; but take flannel. Some manufacturers have introduced cotton into the manufacture of flannel and have been prosecuted and fined for doing so.

3614. That is a question of material only?—That, of course, would correspond to the introduction of maize.

3615. Apart from that altogether, let us look at it from the point of view of the other cereals. You would say that a manufacturer of whiskey in Scotland might use one class of material and the manufacturer in Ireland another class of material?—I do not wish to restrict them; I do not think the use of any grain ought to be restricted except when a name is put to it. If a man calls his product Irish whiskey it should be made in the manner and have the characteristics of what is commonly understood as Irish whiskey.

3616. Apart from the material only, do you know of any restriction which has been placed on a manufacturer with regard to the apparatus he shall use for producing a certain article?—Yes, there have been successful prosecutions for selling hand-made cigarettes which are really made by machine.

3617. Do you think that is a parallel case exactly, they are sold as hand-made cigarettes?—Yes.

3618. That is, they are not machine-made cigarettes?—Yes, and this is sold as pot still whiskey.

3619. Do you know of any manufacturer who has been restricted to any particular form of machine?—There may be some, of course, but it is rather a conundrum to put to me suddenly like that.

3620. Do you not think that by putting any restrictions on apparatus of this kind to be used in a manufactory you are running the risk of seriously retarding the development of and improvement in technical processes?—No, I do not think so at all. There is no restriction on a man using a patent still if he wants to. All the Borough Council of Islington contended for was that if he used a patent still he should let the public know he used it.

3621. You would have the man who produced Scotch whiskey restrict its production to a particular form of apparatus, that is, the pot still?

(*Chairman.*) Without any explanation?

(*Dr. Horace T. Brown.*) Yes, without any explanation?—If he gave no explanation he should be restricted to the pot still, that is to say, that is what I conceive to be the general understanding of what is Scotch whiskey.

3622. That may be, for the present, perfectly true. But supposing genuine Scotch whiskey, with all the characteristics of Scotch whiskey, could be produced with some other form of apparatus, would you necessarily restrict the distiller to the old-fashioned form of pot still?—That is rather a hypothetical question, because no patent still spirit has the characteristics of the pot still. No taster would confuse the two for a moment; in fact, I myself am not a taster, but I think I should not be deceived.

3623. Are you not preventing a man from inventing something which would have that effect?—Not at all. I am speaking now purely under the Sale of Food and Drugs Act. If a sample is submitted to me which is of the nature, substance and quality of the article demanded—the Act does not say it must be the article demanded—there is no offence.

3624. But supposing a whiskey was brought to you with all the characteristics of whiskey as regards flavour, and analysis, and everything else, and that you were told afterwards that it had not been produced in a pot still, would you still put an embargo on that being sold as Scotch or Irish whiskey, as the case might be, no matter what the apparatus was?—You are asking me a question which I think is rather out of the depth of a public analyst. A public analyst knows, or should know, the Sale of Food and Drugs Acts and under the Sale of Food and Drugs Acts that would be no offence.

3625. But a public analyst in this particular case has made the definition, and that definition says you must not use anything but a certain particular form of apparatus. Do you not think that is dangerous looked at as a principle: do you not think you run the risk of preventing invention and legitimate development of apparatus?

(*Chairman.*) Speaking as a matter of law you cannot control the future. A new method of producing a product is invented, and then the different considerations might apply, but I understand that Dr. Teed is applying it to things as they are now?—Certainly.

3626. You cannot look into the future to see what invention will produce. You, Dr. Teed, give no evidence as to the future condition which does not exist at the present moment?—No, my Lord.

3627. (*Dr. Horace T. Brown.*) I am inclined to think there is some evidence to come before this Commission as to the production of whiskey having all the characteristics of whiskey which has not been produced by the old-fashioned pot still. I was rather trying to find out from Dr. Teed what his attitude towards such a whiskey would be?—As a public analyst I should pass it.

3628. (*Chairman.*) Now we have the answer to that last question of Dr. Brown. That brings you to the present. What do you say?—I say that as a public analyst I should pass it as genuine.

3629. (*Dr. Horace T. Brown.*) But if it had come to your knowledge afterwards that it had not been produced in a pot still, what would be your attitude?—One of helpless despair.

3630. (*Mr. Guillemard.*) Even if you knew at the time that it had not been made in a pot still you would still as a public analyst pass it, if it satisfied your standard?—Absolutely.

3631. And so your despair would be greater still?—Yes. If it is the nature, substance, and quality demanded, I cannot go beyond that.

3632. (*Dr. Horace T. Brown.*) May I put to you a case which might be somewhat parallel to what we are considering? I suppose you are cognisant of the modern methods of preparing flour in roller mills?—Unfortunately I am not.

3633. You know the general process?—I know the flour is ground, but I have never been over a mill.

3634. You do not know of any difference in milling that has taken place in this country during the last thirty years?—I think something was said about it by Lord Justice Fletcher Moulton. He remarked something about it at the Police Court.

3635. Perhaps you know that the flour that is turned out from the roller mills differs materially in certain respects from that which was produced by the old grinding method with millstones?—I understand it does.

3636. You know, for instance, that roller mill flour contains none of the germ of the wheat?—Yes, I understand that.

3637. And a very much less proportion of the seed coating or bran, both of which exist in the old-fashioned flour?—Yes.

3638. You also know, I suppose, that there are some people who imagine, perhaps mistakenly, that the comparative absence of some of these constituents, which you may call "bye-products" in the roller mill flour, is by no means an advantage to the consumer from the point of view of health and nutrition?—Yes.

3639. I suppose you know that roller milling has sprung up in order to satisfy the public demand for whiter flour?—Yes, I understand that.

3640. Do you not think that there is a very close analogy between the two classes of milling and the two processes of pot and patent distilling?—There is a certain amount of analogy, but if you will pardon me saying so, I do not see what it has to do with the question.

3641. I think there is a very close parallel?—It remains to be proved yet that the sale of roller mill flour as the old-fashioned flour would not be an offence against the law.

3642. It has been maintained by well meaning people that this fine mill flour is much less nutritious, especially for the young, and that it is not nearly so good for people as the old-fashioned flour?—It may be it is an offence. I do not say it is not.

3643. I am not aware that it is, but supposing a public analyst took it into his head that roller mill

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flour is not entitled to be called flour at all because it has less of the bye-products in it than the old-fashioned flour and does not make, which is perfectly true, a bread having quite the same flavour and quality, do you think such an analyst would be justified on his own responsibility in framing and enforcing a definition which would compel all the millers to revert to their old-fashioned millstones?—No analyst enforces anything. That is a legal point. Here you say are two different products. If the roller mill flour is sold as roller mill flour of course it is no offence. If, on the other hand, it is sold as old-fashioned flour, there would undoubtedly be an offence.

3644. They are both sold as flour?—Flour is a general term, it is an open point. There might be a successful prosecution on it. I hope to goodness I am not asked to conduct it—that is all.

3645. There is only one other question I will trouble you with. That is to ask you something about the relationship of the public analyst to the administration of the Food and Drugs Act; it is a perfectly general question, but I should like some information upon it. Do you think the present system of leaving the framing of definitions and standards to the public analyst to be dealt with on his sole responsibility is a good one?—Speaking as a public analyst if I could shed any portion of my responsibility I should only be too glad to do so.

3646. Do you think there ought to be some properly constituted body to whom he can appeal for advice and assistance in all important matters of this kind?—Certainly.

3647. Matters which of course affect the interests of large and long-established industries, and that if a mistake is made of course they could cause serious inconvenience to these industries, as well as great expense to the ratepayers. You would like to see some central body of that kind to whom you could appeal in moments of doubt?—I think, in common with everybody else, if anybody else would bear my burden I should be only too thankful.

3648. (*Dr. G. S. Buchanan.*) In the present circumstances the public analyst has to do the best he can?—That is so.

3649. If before he made any report he had to know everything that could be known of every matter connected with any given food that was sent to him for examination, if he had to look up all the literature available and test all the manufactures of that food and understand all the varieties of the food, and analyse samples from every place, he could not get on at all?—No, it would involve visits round all the coffee plantations of India, Arabia, South America, and so on before he could venture to say that the coffee was adulterated.

3650. The system of not having some central body to appeal to or having no official definition to go to may be wrong, but in the present circumstances the public analyst has to do what he can without them?—Yes. The original Act gives the public analyst no assistance. The Margarine Act gives him the assistance of defining butter and margarine, and a later Act of 1899 has given him the assistance of standards laid down by the Board of Agriculture.

3651. When it is necessary, as it is in cases where there are no such standards as you have been mentioning or no such official definitions, for the public analyst to put forward something in the nature of a definition of a particular food, is it in all cases you think necessary that he should provide himself with a definition which can be regarded as complete and free from error?—It is very difficult to obtain such a definition.

3652. In the ordinary case—I do not say that this whiskey case is such, or that the Islington case was such—the general object of the public analyst is to get some general and approximate definition of the genuine article, is it not; that is sufficient for him if he has a large departure from such a definition in the case of the particular sample that he is examining?—That is so.

3653. It may be a clumsy or wrong way to go to work, but if the public analyst did not take up new cases from time to time and take action which leads ultimately to official definitions or to general understanding between analysts, which result in what are practically the equivalent of definitions, no progress could be made at all under the Food and Drugs Act?—There could not be any work done unless a public analyst did venture to define things. Take milk, for instance, a public analyst ventured to define milk as being the produce of the cow, but that has been fought all the way round as to whether it is or is not.

3654. You had various questions put to you on the historical question as to what a spirit that was distilled from corn would be described as. There is some authority, is there not, for considering that a spirit that is distilled from corn is not whiskey, but brandy?—Spirit distilled from corn being brandy? I am not aware of that. The Germans use the term Korn Branntwein.

3655. At the time of the prosecution with regard to brandy in Islington, was the question not raised that a corn spirit might legitimately be called brandy?—It was raised, but only two witnesses would give evidence in its favour.

3656. We had on the first day of evidence extracts from Acts of Parliament and other documents, showing that this was the case?—Yes.

3657. (*Mr. Guillemard.*) The reference is given at question 671.

3658. (*Dr. G. S. Buchanan.*) In the brandy prosecution case that you had, was it admitted that the brandy had been mixed with grain spirit?—No, it was not admitted by the defence. The defence was that spirit distilled from bad wine, through a patent still, could not be distinguished from grain spirit, and therefore the analyst was entirely at sea in suggesting that there was grain spirit added and not grape spirit; but one of the witnesses for the defence towards the end actually admitted that in his opinion as a taster there was grain spirit present.

3659. (*Chairman.*) What did you allege the brandy was made from?—40 per cent. grain spirit, or something of that kind.

3660. You alleged that was not brandy?—We alleged that was not brandy, my lord. Of course, in that brandy case we had the definition of the British Pharmacopœia to help us, as that defines brandy, but the British Pharmacopœia unfortunately does not recognise whiskey, so we had no assistance from that source.

3661. (*Dr. G. S. Buchanan.*) You have known of other prosecutions for adulterated brandy?—Yes.

3662. There have been a good number of them, have there not?—There were one or two before the Islington case, in Scotland, and there have been a great many since then. There was an appeal to Quarter Sessions from a conviction by the Kensington Bench.

3663. Could you say whether in those prosecutions it has generally been grain spirit that has been used as an adulterant: do you know if it has been admitted?—I do not think it was admitted in that case. I think they fought it out to the bitter end, and produced evidence that it was genuine brandy, although the ethers were very low indeed. The prosecution in that case quoted the article on Spirits from the "Encyclopædia Britannica" that I have already referred you to, where Dr. Schidrowitz lays down a limit or quotes examples of genuine brandies and spurious brandies.

3664. There are one or two points on your *précis*. On page 8 you tell us both Irish and Scotch patent still spirit are similar in flavour. Do you say that from any special knowledge or any special inquiry?—I have tasted them both, and I could detect no difference; but I was basing it chiefly on the evidence of a witness for the defence from whom it was elicited in the course of cross-examination. I think I have that evidence.

3665. Yes, it is Mr. Stevenson. It was mainly on that that you relied?—That and my own taste. I am not a taster, but I cannot tell the patent still spirit at all; it seems to me to be flavourless.

3666. We were told by you about the hydrolysis of compound ethers in the patent still. Could you give me an illustration of what happens; for instance, take a typical compound ether: what happens when it is hydrolysed?—Taking ethyl acetate, commonly known as acetic ether, when that is acted upon by steam it breaks up into alcohol and acetic acid, so that it would disappear. The acetic acid might not be distilled to the same extent, and the ethyl alcohol would appear there as spirit.

3667. Another point that you drew attention to was the evidence given in the Islington case that pot still distillers in the Highlands were prohibited from selling their whiskies unblended to the public. Did you understand what the objection of the blenders to that was?—The objection was that they would lose the trade, as I understand it. If the distiller sold direct to the public the blender, of course, would have nothing to do with it; but if the distiller sold to the blender, and the blender put in so much of the patent spirit, he would get his profit on the transaction and get his profit on the sale. It is purely based on the evidence given there, not on my own knowledge.

3668. With regard to the co-efficient of impurities that you were asked about, can you tell us in general terms what it consists of? It is the sum of the figures in regard to what?—Acidity, aldehydes, furfural, ethers and higher alcohols.

3669. Those figures do not mean the absolute quantities of the acids, and the aldehydes and furfural and ether, and higher alcohols, present, do they?—I refer to 100,000 parts of absolute alcohol.

3670. But apart from that?—Apart from that all acidity is calculated as acetic acid. All the aldehydes are calculated as ethyl aldehyde. The furfural is simply there as furfural; the ethers are all calculated as ethyl acetate, and the higher alcohols calculated as isobutyl alcohol.

3671. In your case isobutyl?—Yes.

3672. So the figures in each case, with the exception of the furfural, which is not an important factor, are arbitrary figures, are they not?—I should not say so. I should not quite like to accept the term "arbitrary." I should rather put it that they are "grouped" figures.

3673. But there might be considerable differences between two spirits in any group giving the same number: for instance, one spirit might have different acids or different aldehydes to the other?—Yes, I think that is quite possible.

3674. The constituents of each group might be present in different proportions, and, in fact, the total weight of them might be greater in one case than in another, and at the same time they would give the same figure?—That is quite possible.

3675. I only wanted to ascertain that. Then with regard to your higher alcohols figure, that is calculated on isobutyl alcohol. The co-efficient for these added acidity, aldehydes, furfural, ethers and higher alcohols that you have used as a guide, is 380, is it not?—That is so.

3676. Have you any co-efficient for the higher alcohols by themselves, or any different figure?—No, I did not attempt that; I thought I had better take it on the total. I could soon run through them and find which is the lowest one I found.

3677. Do not trouble to do that. If you were to translate your various co-efficients here into new co-efficients based, so far as higher alcohol constituents are concerned, on amyl-alcohol, you would have to compare them with a standard based on amyl-alcohol?—Yes, so I should have to compare my isobutyl with amyl-alcohol, and do it carefully. That is a point Dr. Brown referred to this morning.

3678. What were the co-efficients by your method of reckoning in the Islington case, can you tell me?—I think the certificate is given at the very end of this book. It is at the end of the Sessions book.

3768*a*. (*Dr. Horace Brown.*) Mr. Wells' sample was 174·5 and Mr. Davidge's 110·5.

3679. (*Dr. Adeney.*) I should like, before putting any questions to you, to express my sympathy with the difficulties of a public analyst. The questions I want to put are to get as accurate information as possible. You made, in your *précis*, a statement which runs as follows: "That in the pot still all the bye-products of the fermentation and on the essential oils of the malt or grain employed is all distilled off together with the spirit, and that these bye-products are found in the finished whiskey"?—Yes.

3680. Now I take it, with that idea in your mind, or to lead up to that idea, you made these analyses of spent lees and spent wash that you have given us?—I do not think I gave you the spent lees and the spent wash.

3681. I beg your pardon. But I think you said that you found mere traces of higher alcohols in the spent wash and the spent lees?—This is a telephonic communication from my laboratory. I seem to have examined three samples of spent lees and one sample of spent wash. In one sample of spent lees I found 50 parts of higher alcohols per 100,000 of the spent lees. There was very little alcohol in those spent lees. ·6. I think it was.

3682. Can you give us the figures for spent wash?——60 in the case of a spent wash, and in the two other samples of spent lees I failed to detect higher alcohols. In one I found 50 parts and in the other I failed to detect it.

3683. (*Dr. Horace T. Brown.*) Do you know the relation of the volume of the spent wash to the original wash?—No.

3684. Or the amount of alcohol, because we could check it in that way?—The spent wash would be practically free from alcohol.

3685. If we had the amount of alcohol originally present in the wash, say it was 5 per cent., and the relation of the volume of the spent wash to the original wash, we could determine pretty closely how much had been eliminated in the spent wash?—One could do that, but I do not know what the specific gravity of the original wort was. Some of the distillers started at 1070, and others at 1050.

3686. We might take the alcohol of the original wash as about 5 per cent?—It would be more than that, would it not.

3687. At 1070 it would, of course?—We should have to know at what strength their low wines went over. It is rather a hopeless arithmetical problem on these data.

3688. I should think that would show a very large elimination of the higher alcohols in the spent wash if there were anything like 50 parts to 100,000 of liquid?—You think so?

3689. Very large?—I failed to find it at all in the others.

3690. (*Dr. Adeney.*) I suppose you agree with these results which Dr. Brown has already referred to—namely, the results given by Dr. Schidrowitz in a paper which is a reprint from the Journal of the Institution of Brewing, dated June to August, 1906? He there gives the actual volume of wash still charge and the quantity of pot ale or spent wash left after distillation. He also gives the volume of the low wines still charge and the quantity of foreshotts, whiskey and feints obtained and that of spent lees left. I do not propose to go into details, because they are not your own figures, but what I do wish to refer to is this, that the volume of the spent lees is very much greater than the volume of the whiskey obtained?—Yes.

3691. It is in the proportion of 651 to 170, according to Dr. Schidrowitz's figures. If the figures which you have given for spent lees, 50 per 100,000 of liquid, are approximately referable to similar proportions of spent lees and whiskey, the total amount of impurities of the spent lees which you examined would be considerable, would it not? What I mean to say is, you cannot maintain from these figures, can you, the statement you have made in your *précis* which I have just quoted?—I think so. I do not think that 50 per 100,000 would amount to anything.

3692. Do you know what it would amount to in the whiskey per 100,000 of spirit obtained?—No.

3693. Not more than six times would it be?—Of course, I have not gone into this, and I do not quite follow your method of arithmetic.

3694. I really want to find out, Dr. Teed, because it is of very great importance, whether there is any real scientific basis for the statement that you have made in your *précis*, or is it the general impression of the distiller?—No, I base it as far as tradition goes——

3695. It is a matter of tradition, is it not?—No, you have the statement of Mr. Allen and the statement of Dr. Bell, both agreeing with that view, and you have those analyses, which I think, although not proving it, bear it out; those analyses I gave you of strong feints and strong low wines and finished whiskies.

3696. I would suggest to you that 50 parts per 100,000 is very considerable. That is calculated on

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the total volume of the spent wash or the lees?—Of course, I had only those two, and I do not want to found a theory on them.

3697. I think we may take it there is no real scientific basis for that statement?—Except that I rely on my analyses of strong low wines and low feints and their approximation to the analyses of whiskey.

3698. But they are not whiskey; they are put back to your low wines still?—Yes, but they compare in composition with the finished whiskey.

3699. That may be, but it is not whiskey?—No.

3700. If you will follow out the cycle of changes you are getting time after time a whiskey of approximately similar composition, as far as these impurities are concerned, and you are also getting feints?—Yes, but they all go back into the whiskey.

3701. Something must happen to the impurities in the feints, or they would accumulate to such an extent that you would finally get no whiskey at all?—I have already said that it seems to me that in two of the spent lees I examined I could not find any trace of higher alcohols. To a great extent I base my opinion on that. If you start with a certain amount of low wines, treat it how you like, either in the Irish fashion or in the Scotch fashion, you throw nothing away, and you only produce whiskey.

3702. But you throw your spent lees and your spent wash away?—Yes, but I do not think you will find either in the spent wash or in the spent lees any aldehydes, ethers or higher alcohols or furfural which will show any perceptible difference between the composition of the low wines and that of the whiskey.

3703. You are not basing that statement on any actual observations?—I am basing it on the absence of higher alcohols in the two samples of spent lees.

3704. In another sample you did find it?—I found 50 parts per 100,000 of alcohol.

3705. As a matter of fact you would find an accumulation of impurities in your finished whiskey if something did not happen gradually to carry them off in the spent lees in either a changed or unchanged form?—No, I do not think so.

3706. Then they must accumulate in your whiskey or in your feints?—No, I look at it in this way. I may be entirely wrong, but it is the way I always regarded it. If you have say, taking my analysis A, strong feints on page 9, that is 441·7, the sum of bye-products. If you take either D, E, F, or G, which are all whiskeys from the same distillery, they have approximately the same amount of bye-products.

3707. But then you take those feints and mix them in considerable proportion with some fresh low wines and put those into the low wines still, what product would you get from that combination?—May I take the Scotch?

3708. Yes, it is easier?—You get your low wines; you put into that the feints and the foreshotts from the previous operation. You get your low wines turned into whiskey and get the same amount of feints and foreshotts that you started with, and you put in your feints and foreshotts and turn your low wines into whiskey again and put back the same quantity of feints and foreshotts.

3709. Does the composition of the feints and foreshotts vary, do you think?—I have not gone into that.

3710. You would be inclined to think they were very much the same as the whiskey all through?—I should expect more aldehydes in the foreshotts and possibly a trifle more furfural in the feints.

3711. From cycle of distillation to cycle of distillation—I mean comparing it to whiskey, what do you say?—They might vary a little. Of course a great deal depends on the fermentation. You might get different products in your fermentation.

3712. But, according to your explanation, have not most of the bye-products that you get in the whiskey been derived from the feints and foreshotts of a previous distillation. Where do the feints from the new low wines come in?—Putting it in this way that you had this room full of low wines and you took it in small portions, say 500 or 600 gallons at a time, and distilled it, you would get foreshotts, and you would get whiskey and you would get feints. You take those foreshotts and feints and mix them with another portion.

3713. According to your analyses those feints and foreshotts contain similar proportions of bye-products as the whiskey produced?—Yes.

3714. According to analysis?—Yes.

3715. The volume of those feints and foreshotts is three or four times the volume of the whiskey?—No, I do not think so.

3716. The only evidence we have before us is the published analyses of Dr. Schidrowitz, and they, as I pointed out to you, clearly show the foreshotts and feints are three or four times the volume. That is my difficulty. Can you get me out of that difficulty? It is a genuine difficulty, to my mind?—What happens, of course, is, to carry on my hypothesis, after you have got rid of your few gallons from this room and have got so many less number of gallons of whiskey the feints and foreshotts go back and you put in some more of your low wines. You start with this room full of low wines and you get half a room full of whiskey.

3717. That is a point. What proof have you of that?—It is a question of strength. If you start with a huge quantity as this room would be of low wines

3718. What would be the alcoholic strength of the low wines?—I fancy the Scotch run about 22 under proof.

3719. What volume of water? I see here according to Dr. Schidrowitz the low wines are 66 under proof?—Sixty-six under proof?

3720. Yes?—I have not got any Scotch notes with me, but I think they can get much stronger than that.

3721. What I want to lead up to is the fact that the water in the low wines would be present in much larger proportion than the alcohol?—Yes, it would be a very large proportion.

3722. You certainly would not get a yield of half a room of whiskey?—No, not if it was 66 under proof certainly.

3723. We are really arguing on very uncertain premises. I think you must agree with me that there is really very little scientific basis for this statement that you have put forward?—To summarise my own evidence on it, it is that I find the composition per 100,000 of alcohol in strong feints and low wines is very much the same as that of whiskey. That is part of my basis. The other part is that I have only found traces of higher alcohols in the spent lees and spent wash.

3724. Is it possible to draw any conclusions from your statement without having an approximate knowledge of the volume of low wines you start from and the relative volume of foreshotts whiskey and feints you obtained? You really cannot draw any conclusion, can you?—I think so.

3725. Can you really?—I think so. I look upon foreshotts and feints as merely a transition stage.

3726. They are always appearing in every cycle?—They are a sort of carriers, it is not really their function, but we will assume that they are carriers of low wines into whiskey.

3727. Every charge of wash contains its quota of foreshotts, its whiskey, and its feints. In every cycle of distillation you are taking away the whiskey and putting back the foreshotts and feints, so that you are accumulating your foreshotts unless some change is happening to them whereby they are carried away as waste-products in the spent lees?—Not necessarily, because if I am right in my statement that the whiskey contains the same proportion of bye-products as low wines, there would be no necessity for anything to disappear and no necessity for anything to accumulate.

3728. Then what becomes of the impurities in the foreshotts and the feints?—They keep on remaining in the foreshotts and feints. You have your foreshotts and your feints, you put in a certain quantity of low wines, you distil them, and you get your foreshotts and your feints back as they were to start with.

3729. What about the foreshotts and feints in the quantity of new wash you put in? You have added

those, but you have taken whiskey away?—But you are taking away a lot of bye-products with the whiskey.

3730. According to your first statement the composition of the foreshotts and feints, as far as impurities are concerned, is very similar to that of whiskey?—I have never examined foreshotts, I have only examined strong feints.

3731. I am afraid we must leave it as an unsolved problem so far as your own observations have gone?—I think in low wines the figures are practically the same as in whiskey.

3732. As far as the evidence you have given us is concerned I am afraid it is unsolved?—Very well.

3733. Now, I would like to ask you some questions as to the methods of analysis you have adopted. I notice you have drawn a distinction between the chemical value of the results that you got from some of your impurities as compared with the others. You say: "the methods for the determination of acidity, aldehydes, furfural, and ethers"—by ethers you means esters?—Yes, they are called ethers.

3734. "Are fairly common to all who have dealt with the subject." You mean by that that analysts would differ in the results they would obtain, when employing these methods, by experimental errors only?—Yes.

3735. They would all practically agree as to the results obtained from them?—Yes.

3736. The errors attaching to determinations of those groups of impurities which you have enumerated are not large?—No, I should not think so.

3737. Now, coming to the higher alcohols, you refer to five distinct methods for their determination, and you say later on there are objections to each one of these methods. You do not detail these objections, but you go on to say you consider the French method most suitable. Could you tell the Commission why?—It was the only one at that time of day that could have been adopted for a prosecution under the Sale of Food and Drugs Act.

3738. That was in 1906, I think?—1905. It is not with reference to the chemical knowledge at the time, but in the case of Mason *v.* Cowdary it was laid down that three bottles constituted three different articles, and each article must be separately divided into three parts, that there were three purchases and not one purchase, so that if three bottles of whiskey had been purchased at that time it was laid down that each bottle would have had to be divided into three parts, so that the analyst could not possibly have more than a third of a bottle of whiskey for examination.

3739. What volume would that be in cubic centimetres?—A bottle is a sixth of a gallon; a gallon is 10 pounds, that would be about four kilos, that would be 600 or 700 cubic centimetres for the bottle, so that it would be 200 to 230 for the analyst. Allen-Marquardt calmly starts with 200 cubic centimetres for the higher alcohols.

3740. But that is not a necessity. You can work on 100 cubic centimetres?—You would have to get a duplicate before you dare return a result. You might send a man to prison.

3741. That was your principle?—That was one strong ground, in fact we could not get over that very well. Another ground was that the treatment in the Allen-Marquardt method of oxidation with bi-chromate and sulphuric acid seems to give a varying percentage of the amount of stuff you put in. For instance, to quote figures, I tried oxidising these things without any extractions from alcohol, simply weighing out amyl-alcohol and various things of that kind, and adding bi-chromate and sulphuric acid, and in each case except acetic acid they were partially oxidised to carbonic acid which was lost, and I got varying amounts of acid that I ought to have got. I think I have some figures here.

3742. Could you hand those figures in to us?—I do not seem to have them here, I thought I had.

3743. Perhaps you can send them in?—Yes, I will see if I have them.

3744. You are, of course, aware of the strong opinion that Mr. Allen held as to his Allen-Marquardt system?—It was his own child.

3745. He is not the only analyst that has been wedded to that process?—I will quote an instance that occurred in our brandy case. An eminent analyst for the defence there stated that the spirit contained some 400 parts of higher alcohol. That, of course, was a hopeless statement. Grain spirit could not possibly have contained that, and brandy could not have contained it.

3746. Would you put the figure again?—It is upwards of 400 I put it—I think it was 448.

3747. That is the Allen-Marquardt?—Yes, I believe it was determined that way.

3748. Will you give us the reference to it?—I think you will find that in Mr. Fordham's judgment.

3749. Are you aware of the figures that Dr. Schidrowitz has published having the same or a similar object to your own?—I have read those.

3750. They were published in the "Analyst," that is the journal of the Society of Public Analysts?—I am not a member of that Society.

3751. But you admit it is an authoritative Society?—Not at all.

3752. Really?—No. It is a Society that for many years called itself the Society of Public Analysts, whereas not 25 per cent. of the members were public analysts.

3753. You do not doubt the qualifications of Dr. Schidrowitz as an analyst?—I have no reason one way or the other. I know nothing about Dr. Schidrowitz except from those of his writings which I have read.

3754. For the colorimetric method you say you selected iso-butyl-alcohol as a control?—Yes.

3755. May I ask why you did that?—Because Girard and Cuniasse did it in connection with brandy, and I simply followed that out, having it in the laboratory for the purpose of brandy analysis.

3756. Were you not hampered by the differences of colour?—No.

3757. They do not give the same shade of colour, do they? I mean the iso-butyl-alcohol, and whiskey?—Yes, I think you will find they do pretty well.

3758. My experience does not quite coincide with yours?—Perhaps you have a more accurate eye than I have, or there was a little variation in shade which I did not notice.

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

EIGHTH DAY,

Tuesday, 31st March, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. F. L. Teed.

31 March 1908.

Mr. FRANK LITHERLAND TEED, recalled.

3759. (*Dr. Adeney.*) Dr. Teed, before proceeding with the questions on the methods of analysis I should like to go back to the figures you gave us yesterday for the higher alcohols in the spent wash and the spent lees. I think you said there were 60 parts per 100,000 in the liquid of the spent wash and 50 parts per 100,000 in the spent lees?—Yes, and I had two samples of spent lees, (you have the paper in front of you) in which I think there were none.

3760. I will come to that afterwards. I have calculated what this really means so far as the loss of these higher alcohols by means of the spent wash and spent lees is concerned. If you assume that by the distillation of the wash its volume has been reduced to two-thirds of its original bulk, then 60 parts per 100,000 of the spent wash must be equivalent to two-thirds of 60, that is, 40 parts per 100,000 of the original wash before distillation. If we take 6 per cent. of absolute alcohol as a maximum in the original wash, which I think is a fair figure to take, the above amount of higher alcohols calculated on 100,000 parts of alcohol in the original wash amounts to 666 parts?—I accept your arithmetic.

3761. You accept those figures?—Yes.

3762. If those figures be correct, you eliminate by the spent wash more higher alcohols that you have in the whiskey?—Yes, that is only one experiment of mine. In the two other spent lees I could not find any higher alcohol.

3763. It might interest you if you turn to Dr. Schidrowitz's paper in the journal of the Institute of Brewing in 1906; he rather confirms those figures of yours. He gets for pot ale 62 parts per 100,000 as determined by the method you adopted yourself, the colorimetric method?—Yes.

3764. Then in the spent lees, if you assume their volume to be three times that of the whiskey obtained, the loss by them of higher alcohols, taking your figure of 50 parts per 100,000, would also be considerable?—I accept those figures.

3765. I just wanted to clear that point up?—May I amplify two of my answers given yesterday to Dr. Brown. One was the question as to whether change of manufacture had ever been considered an infringement of the law in any way. I have forgotten the exact question, but I think that is the purport of it. I gave the instance of cigarettes. I should like to add the instance of Demerara sugar. Demerara sugar is an article which is a partially refined sugar, like whiskey is a partially refined alcohol, or an unrefined article whichever way you like to put it, and many prosecutions have taken place where refined sugar has been coloured to imitate Demerara sugar.

3766. (*Dr. G. S. Buchanan.*) The offence has been for selling the pure sugar as Demerara sugar?—That is so.

3767. Not for selling it as sugar?—Not for selling it as sugar, certainly not. The other answer I should like to amplify a little was also to a question by Dr. Brown as to whether I had instigated these prosecutions or whether they had been instigated by the Islington Borough Council. I explained that I had not instigated them or made any suggestion. As Mr. Fletcher Moulton, as he then was, suggested in the police court that these prosecutions had been instituted by the trade, I think I am entitled to say that, as far as I am aware, the trade did not contribute any single coin to the Islington prosecution—certainly none of it came my way; I had no remuneration from the trade. The whole of my remuneration was from the Islington Borough Council.

3768. (*Dr. Horace T. Brown.*) My questions were rather intended to elicit whether you were individually responsible for this particular prosecution?—No, I was not.

3769. (*Dr. Adeney.*) Now, Dr. Teed, there are a number of different alcohols you include under the term higher alcohols?—That is so.

3770. Could you name the chief ones?—I believe they vary in different drinks.

3771. Whiskey, we will take?—I believe it is chiefly amyl in whiskey. I do not know of my own knowledge; I have never examined the point.

3772. You can give us no information as to others?—No direct information.

3773. Have you found, in the composition of similar whiskies, I mean of pot still whiskies from the same distilleries, there is uniformity in chemical composition?—There is no absolute uniformity, but there is a certain sort of resemblance amongst them. If you refer to the tables I have handed in and take, say, Irish Whiskies from Distillery A, and compare all those, say, with Distillery E or Distillery C, you will find that each distillery has more or less a resemblance amongst itself. That is rather well brought out in E. E gives high furfurals. C gives, you might say, medium furfurals. A gives on the whole low furfurals. There is one exception that is 23 years old; that is a very high one.

3774. Of course, you know that it has been stated that the production of these higher alcohols from the worts depends very much on certain nitrogen compounds in the malt?—I have always understood that the higher alcohol was produced towards the end of the fermentation by the ordinary yeast. I know there is a theory that foreign bacteria produced them, but I did actually make some fermentation, I think one we carried through, with a pure yeast culture, and we found higher alcohols present. It was a brandy yeast and the result was something like the composition of brandy.

3775. What I wanted to get from you was whether you can tell us whether the composition of these higher alcohols varied with the quality of the malt?—No, I cannot tell you anything about that. I do not profess to be an expert distiller in any sense of the word. I considered that my functions were really over when I had found a method for distinguishing between the two whiskies, using the term whiskey for the moment to include patent still spirit.

3776. Now to return to the colorimetric method of analysis, you are aware of course that the colour given by different higher alcohols varies in intensity a good deal?—Yes.

3777. Perhaps this book that you have already referred to, by Girard & Cuniasse, would give us

those. It is on page 200. We might have them on the Minutes?—Alcool caprylique, 11; isobutylique, 10; œnanthylique, 7; amylique, 3.

3778. Propylique gives no colouration?—I believe not.

3779. Those are proportional numbers?—Yes. They are not my determination, of course.

3780. No, but that is a recognised text-book?—Yes.

3781. So that this colorimetric test, when applied to different samples of the same class of whiskey, would give considerably different values, if the constituent higher alcohols varied in relative proportions therein?—Assuming, of course, that equal weights were present; that is what you mean?

3782. Yes?—Yes, that is so.

3783. There are several conditions which seriously affect the colour by the colorimetric test. The method of heating with sulphuric acid has a very considerable effect, has it not?—I think so. We just heat to boiling for 15 seconds and then allow it to stand for 45 minutes.

3784. Did you heat over a naked flame?—Yes.

3785. Have you tried what occurs if you heat in a water bath?—No.

3786. Are you aware of any results obtained by the different methods of heating?—No.

3787. Now as to the possibility of obtaining pure isobutylic alcohol for your control. That, of course, is a fundamental detail in the process?—Yes.

3788. Did you find any difficulty in getting the pure isobutylic alcohol?—No. We seemed to have the right specific gravity and the right boiling point, and it seemed to boil right through at the right temperature.

3789. Is it easy to obtain in the market?—I have really forgotten which particular merchant we bought it from.

3790. You have not instituted comparisons with different samples obtained from different dealers?—No, I have not.

3791. And you have paid no particular attention yourself to getting it pure?—Beyond the ordinary test for chemical purity, the ordinary boiling point, and so on, I have not.

3792. Have you had occasion to compare the results you obtained with the results obtained by other observers?—I looked through Dr. Schidrowitz's earlier papers, and I could not find the least resemblance in any particular.

3793. Between yours and his?—No. His aldehydes are quite different from mine, I think you will find.

3794. I am confining myself now to the higher alcohols as indicated by the colorimetric test?—I translated a lot of his figures by using the same factor. I have forgotten it now. It is so many years ago, but I could not find any resemblance.

3795. Those are the only figures you have compared? You have not compared your own results with the results of other observers?—I think you will find three Irish and one Scotch whiskey in that book of Girard & Cuniasse which rather resemble my results. I have forgotten the page.

3796. (*Dr. Horace T. Brown.*) One is a very low one, I think?—Yes, one is a very low one which Messrs. Girard & Cuniasse consider to be adulterated. It was a whiskey purchased in Paris

3797. (*Dr. Adeney.*) Yes, I see it is just half the others?—Yes, there is something curious about that one.

3798. Do those figures for the higher alcohols agree with yours?—I have not the figures in front of me. I think the sum of the bye-products agrees with mine. Looking at Girard & Cuniasse they show a general agreement, I think. I have not worked out the higher alcohols particularly by themselves, but on the whole they are rather lower, I should think.

3799. They are lower than yours, are they?—I think so.

3800. That is the only evidence you can give us to show that other observers would obtain similar figures from the process that you use as you yourself obtain?—I had a conversation with Dr. Clarke who, by a different method, has obtained similar figures. He agreed with my standard: he thought it was a little low, but otherwise he thought it was a correct standard of whiskey.

3801. (*Dr. Horace T. Brown.*) That was a colorimetric method?—Yes.

3802. (*Dr. Adeney.*) There is another point with reference to this colorimetric test I should like to ask you about. The higher alcohols which you enumerated from this book of Girard and Cuniasse are not the only things present in whiskey that will give you a colour?—That is quite possible. There is supposed to be a terpene present.

3803. What about acetate of amyl?—I do not think that would give you very much colour.

3804. Have you tried the experiment?—Not direct on acetate of amyl, but we have tried removing the ethers before determining the higher alcohols and have found no difference. They do not seem to affect the result.

3805. You are relying, I think, for your standard simply upon the gross total of the impurities?—That is the way I used it.

3806. Could you improve that standard by any reference to the relative proportions of each constituent?—I have no doubt it could be done.

3807. My difficulty is this: that your figures for the colorimetric test are so very large compared with your figures for other constituents and unfortunately those figures for the other constituents are really a great deal more exact than they are?—How do you mean more exact?

3808. I think yesterday you told us that the methods for determining the acids and the esters were extremely accurate methods?—They are better than the higher alcohols.

3809. They are a great deal better, are they not?—They are.

3810. Do you not think your standard really practically depends upon this colorimetric test for the figures you get for it?—Unfortunately that is so.

3811. Do not you think that is a danger?—I do.

3812. Would it not be possible to found a standard upon the relative proportions or at any rate with some relation to the other constituents?—It is peculiarly difficult. I will give you an instance. If you refer to my results in Scotch whiskies I refer you to Distillery H; you will find there the quantity of ethers is very much larger than in any other whiskey I have ever come across. If that were taken as the standard of ethers, every other one of them would be condemned.

3813. But you would surely not take such an exceptional analysis as that; you would exclude it for the purpose of determining a standard?—That H is a very fine whiskey.

3814. That would come well within any standard that you formulate upon the esters. There would be no fear with regard to that?—No. Apart from that another very great difficulty in whiskey analysis that I have come across is that whiskey grows; I mean that if you take a new whiskey you do not get nearly so many bye-products as you do in an old one. That throws an additional difficulty in the way of an analyst.

3815. If you know the origin of the whiskey, is that a difficulty?—I think so.

3816. Does it not enable you to form some judgment as to the age of the whiskey?—I do not know. You would have to have a great many more data than I have at my disposal to come to any conclusion.

3817. You do not think, taking a similar whiskey, that the quantities of acids are a characteristic of age?—Yes, the acids seem to increase with age and the aldehydes seem to increase with age, and then occasionally you find there is a drop. You are brought up against a brick wall and you do not know what to do.

3818. My object in asking you these questions is to see how far we can rely upon this colorimetric test. I am afraid two analysts would be very likely to obtain different results even when working as far as possible on similar lines. In my own experience I have got just double the figures when heating over a naked flame as compared with heating in a water bath?—Using the isobutyl in the same way?

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3819. Yes. The method of heating seems to have a very decided influence upon the colouration you get?—Of course, that would mean that each analyst would have to make his own standards.

3820. So that that standard you put forward could not be taken as a general standard for whiskey?—No.

3821. It could only be taken by a chemist for his own individual guidance?—Accepting your figures absolutely, that is, of course, the natural conclusion one would arrive at.

3822. I was under the impression—I cannot pick it out just at the present time—that you had stated in your proof of evidence that different observers would obtain similar figures?—I have obtained the same figures as other observers. It may be, as you suggest, an accident.

3823. I would like to put this question to you. It is, of course, some time ago since you put forward this standard?—Yes, it was in 1905, I think.

3824. I daresay you have done further analyses since then?—I have carried on no further investigations in the matter since then.

3825. But you had the benefit of criticisms from your brother chemists, have you not; have you seen any?—No; I do not read those things.

3826. So far as your knowledge is concerned, you see no reason to in any way modify that standard which you put?—No. I have analysed whiskey from time to time up till last week, for instance, and I find pretty much the same results that I obtained formerly.

3827. Have you, since that standard was formulated, analysed any of the Lowland malt whiskies which are said not to come within your standard?—I have analysed what is sold in the market as a Lowland malt, but that is a malt which has been passed through a patent still. It was a distillery that was brought out in the police court—Glen Mavis. It is a distillery where they use nothing but malt, and they pass it through a patent still; I do not know why. It was not quite clear why they did it. They keep it for five years and it was not quite clear why they kept it, because the son of the proprietor explained that the people who bought it prefer it new, but they always keep it for five years. I think I could find that. That gives a coefficient or a sum of bye-products of 117·6. That was sold, I understand, as a Lowland malt, but, of course, it is not what I recognise as a Lowland malt.

3828. It does not come up to your standard?—No; it is a patent still spirit.

3829. (*Mr. Guillemard.*) There is only one point I should like to ask you a question upon, and perhaps you will excuse me if I do not put it right. Being a layman I am a little out of my depth. I cannot quite understand what will be the practical use of your standard, the minimum coefficient of 380. You maintain, do you not, that pure pot still is whiskey?—Yes.

3830. And you also maintain that a blend of pot still and patent still is not whiskey?—Yes.

3831. Now assume that a spirit is given to you for analysis, and that, as a matter of fact, the coefficient is, say, 390?—Yes.

3832. This is a point that is puzzling me. That coefficient of 390 might be arrived at in two ways; the spirit might be a homogeneous pure pot still spirit working out to 390. That is so, is it not?—Certainly.

3833. It might also be a mixture of a very strong pot, which, I gather from you, might go up to 500?—600.

3834. A mixture of very strong pot still and brought down by the addition of patent still till it gets to 390?—Yes.

3835. Your coefficient would not in any way help to distinguish those two products, would it?—No.

3836. Then it would not help to distinguish two products, one of which you would allow to be sold as whiskey, and one which you would forbid?—It is not a perfect test.

3837. That is what I want to get at; would it be a test at all?—I think so.

3838. Take those two products that I put to you. How would you be able, simply by an analysis that would bring out a coefficient of 390, to arrive at all at whether that was a pure product or a blend. I do not know whether I make myself clear?—Yes, you are quite clear. Taking that test, you could not distinguish between that. All you could do would be to say that you could detect certain frauds, but not all. I am assuming now it is a fraud.

3839. Quite so. What would be the sort of amount you could detect in a blend?—I think I could detect 25 per cent.

3840. Not by the standard? No doubt it is partly through my own ignorance, but I do not quite understand how you could detect it. You have got a product which gives 390?—Yes.

3841. How can you distinguish the pure pot, the unmixed product that gives 390, from a blend that gives 390?—You cannot.

3842. Then detecting the addition of the 25 per cent. of pot still does not come in. The coefficient would be no guide to helping you to know whether any patent still spirit had been added?—Not if you had the coefficient of 390.

3843. That is what I am assuming?—Not in itself. A more elaborate investigation might.

3844. By other processes, but not by the coefficient itself?—No.

3845. (*Chairman.*) Mr. Bramall, in his evidence, told us that the Islington authorities had caused certain purchases to be made of two classes of whiskies?—Yes.

3846. Were they submitted to you for analysis?—Yes.

3847. You discovered, I think, in both those specimens, both those purchases, 90 per cent. of patent and 10 per cent. of pot still?—I have forgotten the exact figures.

3848. I think that is so. However, it was a large proportion of patent?—Yes.

3849. (*Dr. G. S. Buchanan.*) You reported it all as patent still, did you not?—In these two cases.

3850. Mr. Bramall says that was your return?—I think it was entirely patent in these two cases that went to the Police Court.

3851. (*Chairman.*) Your objection, as I gather now from your evidence, is that if the specimen contains such a large proportion of the patent still it is not whiskey at all?—That is my objection.

3852. How does that apply to any range of blend? Suppose it was reversed or suppose it was 50 per cent. of pot and 50 per cent. of patent, where is the point at which you would not be able to call the blend whiskey?—I do not think any blend should be called whiskey, using the term blend in the trade sense for the moment. That is, any admixture of patent spirit should not be allowed to be sold as whiskey.

3853. If the proportion had been changed and it had been 10 per cent. only of patent and 90 per cent. of pot, would you say that 10 per cent., which you would call adulteration, caused the substance to cease to be whiskey?—I think so. I do not say I should have been able to detect it.

3854. What would you fail to detect?—It depends on the strength of the pot still you are mixing with it.

3855. I am taking 90 per cent. pot and 10 per cent. patent, and you say that would cause the substance to cease to be whiskey?—I think so, just the same as the addition of one per cent. of water to milk causes it to cease to be milk, although you may not be able to detect the one per cent. of water.

3856. You are mixing there two different known substances, the water and the milk, but here this patent spirit by some people is called whiskey?—It is called so in the trade, but the public has never been let into the secret.

3857. I am placing full reliance on your evidence, and I am asking you this: the assertion that, by putting 10 per cent. of an ingredient known in the trade as whiskey into 90 per cent. of that which you admit to be whiskey, that 10 per cent. addition alters the substance, is rather a great responsibility, is it not?—I do not say it entirely alters the substance.

3858. I am giving you 10 per cent. and 90 per cent. You know better than I do whether it alters the

substance or not. I am only asking you whether it is not a great responsibility to say that that ought to be condemned as not being whiskey at all?—I should say it is an ingredient mixed with another ingredient, and is not whiskey.

3859. You start with the premise that a patent still whiskey cannot be whiskey at all. That is a question of name. What is the effect upon the mixed body of putting in this 10 per cent. of the patent still? Does it make it at all unhealthy?—No.

3860. To what extent does it lose strength?—In flavour, to the extent roughly of 10 per cent.

3861. Only to the extent of the difference between these two bodies called whiskey by other people?—Yes.

3862. Where is the great evil of this mixture? I am not speaking now of scientifically defrauding the customer, but where is the great evil to the customer that he should have this complaint?—The evil is that he probably pays at the rate of pot still whiskey and gets 10 per cent. of something which costs half the price.

3863. The Commissioners appreciate that somebody would get the benefit, but as to the consumer himself, what is the difference to him whether he drinks one or drinks the other, so that he should be able to say, "I am injured"?—There is the loss of flavour.

3864. Now you come to the practical point. It is the higher flavour and the higher bouquet of the pot still?—That is so.

3865. Is it every customer that likes that very high flavour?—That I cannot say. I may say in fact that I have an instance in my own family circle. My wife cannot possibly drink whiskey but can drink patent still spirit. She detests whiskey.

3866. For some purposes the patent still would be preferred?—Yes.

3867. Why would the patent still be preferred?—By people who do not like the flavour of whiskey. There are people so lost to all sense of palate that they do not like whiskey.

3868. We have heard of cases of a patient requiring a stimulant. According to you is the pot still whiskey a greater stimulant, that is, does it contain more spirit than the patent still?—Not more spirit, but more of the flavouring matters, which I understand the doctors say are valuable. I think Dr. Murrell gave evidence on that.

3869. Does not that contain more stimulating power?—I leave that to the medical men.

3870. A man who goes to a publichouse and asks for a whiskey probably does not go there for the purpose of recuperating his health and obtaining a stimulant for that purpose. What do you think is the difference to the ordinary man—I will not call him the drinker—but the ordinary man who goes in and says to the publican, "Give me a glass of whiskey," between those two bodies, blended patent and the pot still pure?—Personally I should miss the flavour of the pot.

3871. It has a stronger flavour?—A fuller flavour, a finer flavour. In the patent there is no flavour.

3872. Which do you think is best for the man?—I do not think it makes any difference provided they are both old.

3873. Let me put it in another way. On which class of liquor would he become intoxicated more quickly?—I do not think it makes any difference provided he took the same weight of alcohol.

3874. Would not the old pot, with its fuller flavour, be rather more stimulating in that direction?—Not in the way of intoxication.

3875. Then it makes no difference to him which he gets except that you think he is defrauded in the flavour, if he likes it?—Yes.

3876. If he does not like it he gets the better of it?—Yes, if he prefers patent still.

3877. There is no medical inferiority; no alteration?—The medical question I cannot speak about. Dr. Murrell has said there is medical inferiority.

3878. It is bringing it rather to a narrow point, is it not, as to where the injury arises?—I do not know. It seems to me a very important point; it is to his pocket.

3879. I mean as to the injury inflicted on a person?—It is a pocket injury, a question of money.

3880. Do not think I am not appreciating that. If a seller is selling a very cheap article at a dear price that is a very great evil, and ought to be changed if possible, but on the other point, as regards the injury to the customer, there is not much injury to him?—There is no injury except that he gets an inferior article. The man who asks for whiskey probably wants whiskey.

3881. I am endeavouring to get from you whether this is a question of name or substance. With the exception of the higher flavour which the man may like in the pot still there is no difference?—I see not the slightest objection to patent still spirit being sold under its own name. If a man prefers patent still spirit, and we have heard there are people who do, by all means let him have it, and let it be sold as patent still.

3882. We heard from Mr. Bramall, who gave his evidence very clearly, that he did not object to the sale of this patent spirit, speaking with such authority as he possessed?—No, neither do I.

3883. All that you want is that the person who pays should know whether he is getting patent or pot still?—That is so.

3884. Supposing he does not know the difference between the two what is the advantage of his knowing?—I think he would very soon be educated if he had a chance of tasting the two.

3885. It is perhaps in happy ignorance that he goes to a public-house and asks for a glass of whiskey, and does not know whether it is pot or patent he is getting?—I think you will find the bars where they sell pot still are more frequented than those where they sell patent still.

3886. That is what I am asking you. With the experience you have on the subject how are you going to let the man know? I am not speaking of where the whiskey is in casks or even in bottles; if a man goes into a public-house and says, "Give me a glass of whiskey," what is the licensed victualler entitled to do?—I should think he would have to give him either Scotch or Irish whiskey.

3887. That, translated, meaning pot still whiskey?—Yes.

3888. If he asks for whiskey is it a logical view that the innkeeper if he had got what in the trade is called whiskey, namely, patent still, would not be entitled to give it him, but must give him the pot still whiskey?—That is my interpretation.

3889. If he said, "I want pot still whiskey," he would have no means of testing it at the moment except by the taste?—That is so, you cannot carry a laboratory around with you.

3890. I do not see how you could carry the argument into enforcing it with regard to these retail purchases?—It would be quite possible to make a retail purchase, and have it tested analytically.

3891. I am speaking in the ordinary way. An ordinary person would not see the bottle probably?—No. There are men who have such palates who could tell better than by any analysis what the sample was; a professional taster could tell you the composition of the spirit supplied much better than any chemist.

3892. Have you learned whether many people prefer the blended whiskey to either of the pure whiskies?—I cannot say that. I have heard of instances where people who for the first time in their lives tasted real whiskey have said they never knew what whiskey was before.

3893. They found it a little strong, of course?—No; they found it very good.

3894. You know from your knowledge that there is an enormous quantity of this blended whiskey sold?—Yes, unfortunately.

3895. I do not see why, and I am sure you will tell me, if it is not hurting anybody to drink it?—I am, perhaps, speaking rather personally. If I am invited to whiskey, which I sometimes take, and I am supplied with some obviously patent spirit, it is a great disappointment to my palate.

3896. That is almost a conclusive argument, and I do not see what I am to say to it. I shall not be able to carry you over your disappointment. That really probably is the foundation of your evidence to a great extent?—I rather like good whiskey.

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3897. You prefer the pot?—Distinctly.

3898. Have you ever tried the ordinary blend?—Yes.

3899. You do not like it?—No, not as compared with pot. There is a want of flavour about it.

3900. (*Dr. Adeney.*) May I ask Dr. Teed one or two more questions? I promised to give you an opportunity of putting some further figures in about the wash and spent lees. Would you describe those?—In one sample of spent lees from the No. 1 low wines still, I find furfural 0·1 per 100,000 of the spent lees, and the higher alcohols were absent. From the same distillery from No. 2 low wines still, I found furfural 0·1 per 100,000 of spent lees; the higher alcohols absent. Then, in the spent wash from the same distillery, I found furfural 0·25 per 100,000 of spent wash; higher alcohols 60 per 100,000 of spent wash. Another spent wash, from wort of higher original gravity, I found furfural 0·5 per 100,000 of spent wash; higher alcohols 60 per 100,000 of spent wash. From another distillery I found in the spent lees higher alcohols 50 per 100,000.

3901. There is one more question I wanted to ask you. It is important to separate furfural before proceeding to any colorimetric test, is it not?—I should say very much so.

3902. And you did that by treatment with metaphenylenediamine-hydrochloride?—That is so.

3903. Is that a complete means of separation of the furfural?—All the tests I have tried on that point show that it is. I know that point is disputed.

3904. If the dispute were justified, that is to say, if it does not wholly separate it, it would affect your colorimetric tests?—Yes, make them a little higher. Then did you want to know something about some tests of mine on the Allen-Marquardt method?

3905. It would be as well if you put them in; perhaps you would read them so that we shall have them on the minutes?—In order to check this process I took weighed quantities of amyl-alcohol, and I tried it without dissolving it in spirit, and without extracting it with tetrachloride of carbon. I treated it directly with the oxidising mixture as recommended, and I found that when the oxidation lasted three hours I only obtained 81 per cent. of the amyl-alcohol. Oxidising for the whole day I found 82·7 per cent. With isobutyl alcohol in three hours I got 55·2 per cent., and in the whole day 62·0 per cent. Valeric acid treated for the whole day gave 75·7 per cent. In order to show there was no loss in the process I took some valeric acid and mixed it with this bichromate mixture, and distilled it at once, and there was no loss. It was not a case of its escaping while being distilled. I got it all back on immediate distillation. Then butyric acid for the whole day gave 83·6 per cent., and immediate distillation gave 95·4 per cent. Acetic acid showed no loss whether oxidised for the whole day or distilled at once. In all these cases carbonic acid was given off except in the case of acetic acid. Then I tried one blank experiment with pure alcohol, alcohol that I had reason to suppose was quite free from higher alcohols, and the figure I obtained expressed in terms of amyl-alcohol would have shown 95 parts per 100,000 of absolute alcohol. Those are the tests I tried that showed me even that method was not a perfect method.

3906. I am afraid I shall have to ask you a few more questions upon that. What amylic alcohol did you take?—I got it from one of the chemical dealers.

3907. Do you think it would be safe to depend upon the purity of that?—I think we took its boiling point and all that sort of thing.

3908. Do you remember what the boiling point was?—No, I do not. These were done years ago, and I have only rough notes of them.

3909. Was it a normal alcohol?—I think it was a fermentation alcohol.

3910. In the process of digesting what means did you take to avoid loss?—A reflux condenser.

3911. That was all?—Yes, I think that was all.

3912. Then you used carbon tetrachloride?—No. These were done so as to eliminate everything. I wanted to see what the actual oxidation of these things produced without the tetrachloride of carbon, and without extracting it from alcohol—simply weighing out so much.

3913. What was the nature of your experiment with alcohol by itself?—That was extracted with tetrachloride of carbon, just the Allen-Marquardt method shaken up with brine and the tetrachloride of carbon oxidised with the bi-chromate.

3914. What was the result?—The result showed that the original alcohol, which was blank or pure alcohol, worked backwards, would have contained 95 parts of amyl-alcohol per 100,000 of absolute alcohol.

3915. In the use of the carbon tetrachloride in that experiment what care did you take to get a pure tetrachloride?—Again it is many years ago, but I think we oxidised it by itself first and then distilled it. Then may I draw your attention to an answer which I gave yesterday with regard to the higher alcohols determined in the brandy case by an eminent analyst. I think I stated in my answer that he found 448 parts.

3916. (*Dr. Horace T. Brown.*) Was that in the evidence of Dr. Hehner?—Yes. He found 468 parts, and that of course was in a brandy, which never contains 468—a genuine brandy mixed with a grain spirit which contains not more than 50 to 80. It simply shows to my mind that even an eminent analyst like that with a process like the Allen-Marquardt, might go very far wrong. Then I should like to show you, if it is not too late, a little parcel of essences, I think they call them, for making whiskey out of patent still spirit. There are a number of them here, with various objectionable odours, and some are to make brandy, and some to make rum, and some to make extra fine rum, and some to make Scotch whiskey, and some to make Irish whiskey.

3917. (*Mr. Guillemard.*) Have you any evidence as to the actual use of those things for that purpose?—I can only say that I think Mr. Bramall has already put in the trade list of one firm that advertises the sale of these things. That is a trade list of another firm with a letter accompanying it.

3918. (*Chairman.*) This list refers to turpentine, and so on. What shall I find in this trade list about these essences?—Only the prices. Mr. Pheysey handed me these things. He was a witness in this case.

3919. (*Mr. Guillemard.*) Have you any knowledge of what trade these people do, or who their clients are?—No, I know nothing about them.

(*Chairman.*) This is very important, but I think if it is to be proved it must be proved in a more direct manner. We can call Mr. Pheysey back if necessary.

The witness withdrew.

Dr. Philip Schidrowitz, called.

Dr. P. Schidrowitz.

3920. (*Dr. Adeney.*) You are a consulting and analytical chemist and a specialist in the alcohol industries?—Yes.

3921. You are a Doctor of Philosophy in the University of Berne?—Yes.

3922. A Fellow of the Chemical Society and a past Member of the Council of the Society of Public Analysts?—Yes.

3923. A Member of the Committee of the Society of Chemical Industry and a Member of the Council of the Institute of Brewing?—Yes.

3924. And you have been called to give evidence before several Departmental Committees, I believe?—Yes.

3925. Were you in any way connected with the Islington trial?—I was present at the trial.

3926. You were not retained by either side, were you?—Yes, I was. I was retained by the defence in that case.

3927. You are the author of numerous papers dealing with the chemistry and technology of the various alcohol industries?—Yes.

3928. Would you like to give a list of papers which you wish particularly to refer to?—Among others there is "The Chemistry of Whiskey," two papers in the Journal of the Society of Chemical Industry; "The Distillation of Whiskey," in the Journal of the Institute of Brewing; "The Application of Science to the Manufacture of Whiskey," in the same Journal; "The Practical Application of Pure Cultures in the Distillery," which I have read quite recently, and which will appear in the same Journal. Then "Some Experiments on the Proteolytic Enzyme of Malt," in the same Journal; a paper on "Brandy," in the same Journal; and two papers on "The Estimation of Higher Alcohols," which appear in "The Analyst." There are a number of other papers, but it is not necessary to mention them.

3929. Those are all you wish specially to mention?—Yes.

3930. You have, I believe, had a wide experience of the manufacture, technology, and chemistry of spirits, particularly of whiskey?—Yes.

3931. And you are familiar with a large number of distilleries?—Yes.

3932. And you are frequently consulted with regard to technical and scientific points bearing on distillery work?—Yes.

3933. You have made a very large number of analyses of whiskey, etc.?—I have.

3934. I would like in the first instance to ask you some questions with regard to the restriction on materials employed. What opinion have you formed?—My opinion is that one may very well restrict the materials from which whiskey can be made to cereal grains, and I think that would very accurately describe whiskey as it is made at the present time.

3935. You would say that only cereal grains are to be employed?—Yes, I think that only cereal grains should be allowed—at any rate, so far as Irish and Scotch whiskey are concerned.

3936. Would you define cereal grains in relation to Ireland and Scotland?—I mean such grains as barley, wheat, rye, oats, maize, rice, and similar grains.

3937. You would not exclude maize?—No, certainly not.

3938. And you would include rice?—Yes. I think the only reason why rice is not used is because of its cost.

3939. It would not affect the flavours?—I do not think so.

3940. Should there be a minimum of malt employed in the mash, do you think?—My view is this, that the amount of malt in the mash is dependent upon two factors. First of all, on the necessary quantity of diastase for conversion; and secondly, for flavour; and in my view the sole limitation which one could impose would be that of flavour, and as long as one cannot define or standardise a flavour I do not see how one could standardise a mash. At the present time I believe that the majority of the great patent still distillers employ approximately 25 to 30 per cent. of malt, which is a great deal more than is necessary for conversion purposes, merely for the conversion of the starch; and I think that fairly describes the patent still practice generally. Whether it would be desirable to stereotype that is rather more a question, I think, for the trade.

3941. The all important question of flavours, I suppose, would dominate that?—I think so. May I say one word with regard to maize. The question of the propriety of the use of maize has been raised very largely in these discussions, and I think on the one hand it is contended that if you use maize in a pot still you get an undrinkable product. I do not think that need be seriously considered, because there are millions of people in the United States of America who drink nothing else. Secondly, the argument is advanced that although maize may produce a potable spirit in a pot still, it does not produce Scotch whiskey or Irish whiskey. I think there is a good deal to be said for that, or there was until quite recently. But quite recently there has been a very important paper in the Journal of the American Chemical Society by two members of the staff of the Inland Revenue Laboratory in America. I have that paper here. It is in the January number of the Journal of the American Chemical Society of this year. They come to the conclusion that the specific characteristics of American whiskey are due almost entirely to the method of storage and the type of cask employed. In America they use a cask which is very highly charred, and that produces an entirely different type of flavours to the ordinary cask as we use it here, or a sherry cask.

3942. (*Chairman.*) What is the effect of the charring?—The effect of heating the inside of the cask is to carbonise it, and a certain amount of charcoal, a layer of charcoal is formed, and that layer of charcoal has a specific effect on flavour. I may say charcoal is also used largely by the Irish distillers in their stills, but that is another matter. In the latter case it is used for the purpose of purification. In their conclusions they say on page 136: "The characteristic aroma of American whiskey is derived almost entirely from the charred package in which it is aged." I have here a sample of American Bourbon whiskey made from maize, or largely from maize, and I should like you to see that this is, at any rate, not an undrinkable or very unpleasant product. It may not suit the palate of the consumer here, but at any rate it is not an undrinkable product.

3943. Where did you get that from?—That was sent to me from America.

3944. Do you know anything of its origin?—Yes, I specially wrote over to America to get a sample of Bourbon whiskey, and that is a very well-known brand, "Old Pepper whiskey."

3945. (*Dr. Horace T. Brown.*) Did that come from Dr. Wiley?—No, I did not get that from Dr. Wiley.

3946. (*Dr. Adeney.*) That is a maize pot still whiskey?—Mainly maize.

3947. But a pot still whiskey?—Certainly pot still.

3948. (*Chairman.*) Does it come up to our idea of whiskey in this country?
(*Dr. Adeney.*) It does not come up to mine.

3949. (*Chairman.*) What do you say to this? Does it occur to you that this whiskey you have produced tastes like pure whiskey that we should have here?—No, my lord, the flavour is different, but that is largely due, as these people I have quoted have pointed out, to the character of the cask in which the whiskey is matured, and it may not suit our palate here, but at any rate the fact that many millions of American citizens drink that whiskey goes far to show that it is not an unpotable spirit.

3950. (*Dr. Adeney.*) Is there any material difference in chemical composition?—I have some analyses of the American whiskies which I will put in later on if you do not mind. On the average the amount of impurities or bye-products, or whatever one likes to call them, is a good deal higher than in our whiskies—in fact, it is about double.

3951. The acids are high?—The acids are high, and the esters are high, and the higher alcohols are high. While we are on the subject of malt, I have been digging on this subject into some ancient literature, and I have a book here which was published in Scotland in the year 1785, and it is obvious from a passage on page 3 of the second part of this book, which is a collection of articles, that even at that time there was a commotion as to how much malt should be used in Scotland. The agricultural party, who then, as now, I presume, was opposed to the industrial party, said this: "That the home-made spirit formerly used in Scotland was extracted from grain of the growth of its own lands, all of which being malted, and with no mixture of raw grain or other ingredients being then known, the produce was a wholesome and agreeable spirit." Then the distillers make answer to this, and they point out that it was the Dutch who taught people in this benighted country to use unmalted grain, and later on there is a reference to some bad whiskey. There is a reference to the Irish usquebaugh on pages 21 and 22. The Scotch people there suggest that the particular sample which was very bad was probably Irish, and made from potatoes. I do not suppose there was any truth in that, but it is rather interesting to know even in those days that these tales were about. That is the passage about malt on page 3.

3952. Is that all you have to say on that?—I was going to say more, but I listened to Dr. Teed's examination yesterday, and a great deal was said

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about the battle between the little stills and the big stills, so that I will not refer to it further.

3953. In your opinion, can a definition be based on materials?—I think that one could base a descriptive definition on materials, but beyond that I do not think one could go. I have here an appendix which I will formally hand in—Appendix No. 1, "Definitions of Whiskey," in which there is a large number of definitions (*see Appendix E, 1*). I do not know whether it is worth while reading all those out, but I have here an official copy of the Pharmacopœia of the United States which possibly may be of interest, because in the United States whiskey is defined officially in the Pharmacopœia; it is on page 418 of the Pharmacopœia of the United States, the 8th decennial revision—that is the last copy, and it is an authenticated copy. They say there: "Spiritus Frumenti. Whiskey. An alcoholic liquor obtained by the distillation of the mash of fermented grain, such as Indian corn, rye, wheat and barley, or their mixtures." There is no mention there of the still, and they do not mention rice. Then there is a description, which I need not read.

3954. (*Dr. Cushny.*) That is not published by the United States Government, is it?—I do not know who it is published by. I think it is published in the same manner more or less as it is here—by a Committee.

3955. It is not a Governmental publication?—No, I do not think it is Governmental. This is an official copy of the Pharmacopœia.

3956. (*Chairman.*) With regard to the specimen that you handed to Dr. Adeney, is there any barley at all in that, or is it all maize?—No, they would use a certain amount of barley.

3957. Do you know what amount of barley?—I have a large number of figures here with regard to American whiskies, and I could give you some idea from that.

3958. But taking it generally, there would be a small proportion of barley malt?—Yes.

3959. The main ingredient being maize?—Yes.

3960. (*Dr. Horace T. Brown.*) With regard to the relation of malt to maize is that proportionately the same as it is in our patent still mash in this country?—I should think about that.

3961. 20 or 30 per cent.?—Something like that.

3962. And the balance all maize?—May I read you a few examples? I have a lot of tables here which were sent me by Dr. Wiley, and there are a great many more in that paper of the American Chemical Society. I have here a description of the manufacture of Bourbon whiskey. Here is one: "75 per cent. corn"—that is maize—"15 per cent. rye, and 10 per cent. of malt." Then they have 71 per cent. of corn, 27 per cent. of rye, and 2 per cent. of malt. I presume in that case probably part of the rye would have been malted.

3963. (*Dr. Adeney.*) I would suggest, my lord, that it might be convenient to take this witness's evidence in sections, and if any other member of the Commission would like to ask questions on this section it would be convenient to ask them now.

(*Chairman.*) Certainly.

3964. (*Mr. Guillemard.*) I think you said that in your opinion a definition of whiskey by reference to materials could be given. Have you given one?—No, I think not.

3965. Have you one which you would like to give?—I should merely confine myself to saying this, that whiskey is a spirit distilled from cereal grains—that is all I care to say.

3966. You would include rice in the cereals?—I think so. It is not used at present, but I do not see any objection to its use.

3967. (*Dr. G. S. Buchanan.*) Your reason for including rice would be that it might form a part of the mash. I suppose it could not form the whole mash?—No.

3968. But it would contribute something to the alcohol?—Yes, quite so.

3969. Is there anything with regard to Scotch or Irish whiskey—any one of these ingredients, barley, maize, and rice, and malt, that you would consider absolutely essential from the flavouring point of view?—I think that in Irish and Scotch whiskey a certain proportion of barley malt is essential.

3970. If you used only the minimum amount of malt that was necessary for the conversion of these grains that might be something low—18 per cent. or something like that?—You could go lower if you use long green malt as they do on the Continent, you could go down as low as 5 or 6 per cent.

3971. That would not contribute a whiskey flavour?—No.

3972. When you get up to 25 per cent. you think it would add materially?—Undoubtedly. I should say that using the type of malt which is used now in Scotland, if they wish to use a minimum they would probably employ about 12 to 15 per cent. at the outside.

3973. A good deal would depend upon the character of the malt that was used?—Certainly.

3974. You could have a malt conceivably I take it that even if you use 25 per cent. it would add very little in the way of flavour?—Yes, and you might have the reverse. Instead of a low kilned malt you might use a high kilned malt, such as we use for black beer, which would give with 5 per cent. probably as much flavour as another malt with 20.

3975. It might do that in the patent still?—Yes, certainly.

3976. If you allow any cereal grains to be used, although they do not give the characteristic flavour to the whiskey, why should you limit your materials to cereals, and why should you not go a step further and allow the sort of articles that were brought up here just now—those essences—if it is only a question of flavour? Assuming that it was possible to flavour by the essences an all maize spirit with the same kind of flavour, is there any reason why that should not be called whiskey?—I should personally object to it very strongly. In my definition—I do not want to have it regarded as a definition because it was really rather more a description, but I should personally object very much to these flavouring matters, and later on I shall have something to say on that particular subject. I do not think you could get the correct flavour with essences.

3977. Is it something a little more than flavour? You think that the definition of whiskey ought to be something a little more than flavour, do you not?—I cannot regard it as a definition. It is more a description of what I think whiskey is, and how it is made at the present time.

3978. I am not quite clear with regard to maize. Taking the pot still, does maize give a distinctive flavour to the whiskey that is produced?—I think that every grain probably gives a distinctive flavour, but I do not know that we have enough specific knowledge on that subject to differentiate very closely.

3979. You do not know whether there are any special distinctive flavours that are ordinarily attached to maize?—The distinctive character of maize is more in connection with the maize oil, and that is a very high boiling point substance and does not come over.

3980. You regard maize as distilled in the patent still process by the ordinary method as a neutral product as regards flavour?—I do not say that. I think it is no more neutral than is barley or rye, or oats or wheat. I think each of these things probably have a specific flavour of their own.

3981. There is one point I did not understand about the American whiskey in which flavour may be due to the cask. I gather that some observers had found the flavour was mainly due to the cask?—Yes.

3982. Are they speaking there solely of pot still Bourbon whiskey?—Yes. If you look at the figures you will see that they refer to straight whiskies. In America they do not make the differentiation in the same terms as we do. They do not talk of pot stills and patent stills, but they talk of straight whiskies, and their straight whiskey practically corresponds to what we call pot still here. They are distilled rather differently in fact, and a very large number of their straight whiskies they distil with live steam. They have a three-chambered still, one above the other, and the wash is put into the lower still. The three compartments are partially filled with wash, live steam is

blown into the lower chamber, and that causes the contents to boil; the vapours rise in the next chamber through a trap, and the next chamber boils, and so on.

3983. (*Dr. Bradford.*) Are we to understand that the pot still used in America is different to the pot still here?—Yes, undoubtedly. Some of them use what they call the old-fashioned fire copper, but, I believe, that is quite unusual, for most of these celebrated straight whiskies are, I believe, made with the live steam process.

3984. The pot stills in America are heated with steam?—Yes.

3985. (*Mr. Guillemard.*) What is the other still in America—the still that does not produce the straight whiskey?—They have a large variety of styles of still which they use for producing a more neutral type of spirit which is more of the type of apparatus which is employed on the Continent.

3986. Is it different from our Coffey still?—Yes; I do not think they employ the Coffey still very much in America, because they do not regard it as efficient for the production of the purer article, but they use a still which produces a much purer article. The Coffey still is by no means the best instrument for producing a pure alcohol.

3987. (*Dr. G. S. Buchanan.*) There is an enormous output in America of spirit fairly highly rectified, which is mainly flavoured and coloured?—I do not know to what extent that is so. I have heard it said it is done, but I have not sufficient personal knowledge to speak to that.

3988. What you speak of, so far as I have seen from one or two references, is what is called compounded spirit in America, a highly rectified spirit with a small amount of essences added, or added oils, or something of that kind?—I have seen it stated that it is so, but I really cannot say from my own knowledge.

3989. (*Dr. Horace T. Brown.*) You would restrict materials to cereals?—Yes.

3990. Only to those cereals that you specify, or to cereals generally?—Really I do not wish to make a restriction at all; I merely wish to give a description.

3991. You would not rule out, say, sorghum or millet?—I do not think I should be inclined to rule out any cereal.

3992. What about buck wheat? Could buck wheat be considered a cereal? Is that generally included in the term "cereals"? It is very largely used in America for certain purposes as you know?—Yes.

3993. Do you know whether it is used there at all for spirit making?—I do not know of my own knowledge. I can look up these lists to see if any buck wheat is used.

3994. Do you know any pot still distilleries using maize in Great Britain?—I do not know any of my own knowledge, but I believe it is the fact.

3995. Have you seen the whiskey produced in those pot distilleries using maize? We have had it here in evidence that a small amount of maize is used in certain pot still distilleries?—I think I have seen one, but I would not be quite sure.

3996. You do not know what the general character of that whiskey is?—The whiskey I am thinking of, and I believe it has a little maize in it, is to my palate quite indistinguishable from ordinary Scotch pot still.

3997. Is that distilled in the ordinary pot still without any rectifying apparatus?—Yes. I am not sure whether this was, or whether this particular spirit I have in my mind is made with maize, but I rather think it was.

3998. We have had it before us that there would not be a great objection on the part of certain pot distillers in this country to include maize amongst the materials for distillation if it were confined to pot stills, because they felt sure that the public taste would reduce the amount to a minimum?—I think that is nonsense.

3999. You cannot give us any positive information from your own observations on the pot still maize product?—No, I am afraid I cannot.

4000. (*Chairman.*) I really do not know what you think the virtues of whiskey may be, but what comparison do you draw according to your standard of the virtue of whiskey between the malt whiskey made in this country and the American maize whiskey?—There is a difference of flavour, and I think that is largely due as we now know to the type of cask employed, and I think it is purely a question of flavour.

4001. Do you think for all purposes of health, if it was to be used as medicine, or if used for the pleasure of drinking, that the person who consumed it would derive as much benefit from the American maize whiskey as from our malt whiskey?—I think that if that was the flavour that suited his palate he would probably derive as much benefit from it as from the other.

4002. It is not only a question of flavour, it is a question of the utility of what he consumes on his system?—I think that is rather a medical question.

4003. I was giving you credit for universal knowledge on the subject?—I do not personally think it would matter the least little bit. I think it is really a question of flavour myself. A man drinks the whiskey which he likes, and that does him most good.

4004. It is rather reducing this great question to this, according to you: if in America you cannot get the right cask to produce the flavour, which is entirely fictitious as regards whiskey, so that it will imitate the real whiskey in such a way as to make the person drinking it think he is drinking whiskey that he wants ——?—I am afraid I do not follow you.

4005. You have told us about this charred cask, and you have said that that produces the flavour?—Yes.

4006. That is nothing to do with the ingredients in the compound?—No.

4007. That flavour of the cask as regards whiskey is fictitious?—I think not, my lord. I might almost go so far as to say that new whiskey as it comes from the still, whether it is a pot still or patent still, or American, Scotch, or Irish, I think, really, one might almost go so far as to say that, as far as the consumer is concerned, that is not whiskey at all, because the character which the consumer recognises comes very largely indeed from the cask.

4008. I wanted to deal with the instance you have given of this large quantity of maize whiskey which was consumed in America, because it struck me as very important. That has no malt in it, or only 2 per cent. of malt in it. If you had that without the cask what would become of it? Would it be treated as whiskey?—I think so. It would have more of the character of our whiskey over here.

4009. Therefore, you are treating the maize as being a sufficient equivalent for our malt?—I think it produces a different article, but it is a question of different flavours.

4010. The flavour, as I understand from you, came from the charred cask?—The specific flavour of American whiskey.

4011. That is what the American people are drinking—something which has been in the charred cask but which is called whiskey?—In the same way in this country we use, for instance, sherry casks and plain casks from which also material is extracted which gives flavours.

4012. Is this use of the charred cask in America pretty general?—Absolutely universal.

4013. That is not so here as regards sherry casks?—No, sherry casks are not universal here. I suppose the amount bonded in sherry wood is probably less than that bonded in plain wood.

4014. I suppose the malt pot still whiskey would not require a sherry cask to add to its bouquet?—On the contrary, I think it is preferred, because a sherry cask, I have heard and believe, has something in it which tends to make the whiskey mature more quickly.

4015. Perhaps it softens it?—It matures more quickly than in the ordinary cask, and apparently that is not due merely to the sherry. Apparently the sherry wood has some specific influence on whiskey which causes it to mature more quickly.

4016. Is that apart from flavour?—Yes, I think you will probably find that confirmed if you ask questions on the subject from any blenders.

4017. (*Dr. Adeney.*) In your description of the materials I take it you include malt?—Yes, certainly.

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4018. Is there any malt in the spirit sold in America as we understand it in this country?—I think it is not that type of spirit at all.

4019. Is there any blending of this straight whiskey with rectified spirit?—Yes, a great deal.

4020. With regard to this sherry cask. I believe if you take the sherry cask as compared with plain wood the composition of the whiskey age for age between the two is very different?—Yes, I think so, undoubtedly. The positive information we have of it is not so full as it might be, but there is some information on the subject in my second paper on the "Chemistry of Whiskey."' I do not think there is much doubt about it.

4021. Now we will go to the next section of your proof, which is headed, "With regard to the restrictions on processes or apparatus." Speaking generally, do you think that any restrictions regarding processes or apparatus are desirable or necessary?—I think not. I think, in my opinion, as I have already said, it is really a question of flavour. There is no question of public health. I think that has been admitted all round, and there is no question of whiskey being a food product—that is to say, it is not comparable to articles such as milk and butter. I will refer to that presently. The whole question, after all, amounts to this: Here we have a certain spirit, patent still whiskey or patent still spirit, call it whatever you will. Some people say that has a right to the name of "whiskey," and other people say it has not a right to the name of "whiskey." The whole thing amounts to this: Has that particular type of spirit the right to a particular name? There is no question of health or food, and no other question whatever. I think under those conditions it would be a very retrograde step (I have considered this question very carefully) to make any restrictions on processes or apparatus, because, after all, it is a purely manufacturing operation. Whiskey is not a natural product like milk or butter; it is a manufactured product, and it seems to me as long as there is no question of health and no question of food value there is no question of fraud. I know that possibly here my opinion may differ from others, but, at any rate, it is not the same question as it is in the case of milk. That is a simile which is a very bad simile, because milk is a natural product, and even though there may have been at one time no statutory method of dealing with the watering of milk, I do not think any honest or decent persons would ever have thought or considered that the watering of milk was a proper operation. I cannot speak legally, but it seems to me that the intent is a very great factor in these matters. There was always an intent to deceive when milk was watered, and there was always an intent to profit by it. In the case of patent still whiskey, whether it has the right to the name of whiskey or not, it was always manufactured openly, it was manufactured under the eyes of the Excise, and if it had been in any way comparable to the watering of milk, surely it would have been stopped. I think in the one case there is no doubt that it is an immoral thing—obviously an immoral and unethical thing; in the other it is just a question of opinion.

4022. Suppose in the development of processes it were possible to employ as a material molasses or cane sugar, what would you say of the spirit that came from that? Would you still allow that to be called whiskey? Would you expand your description so as to include that?—I do not think that from molasses you would ever really get the type of spirit that would go very well as whiskey.

4023. Would it not be fair to the trade to demand that it should be called by another name than "whiskey"?—If it did give a different flavour?

4024. If it were possible to use molasses in the manufacture of whiskey by improved processes?—Personally I should rather object to it.

4025. Do not you think it would be fair to the trade to demand that it should be called by some other name?—I think so in that case. At present I would certainly very much object to molasses spirit being called whiskey.

4026. What are the scientific and technological aspects of restricting distillers to a particular form of apparatus?—I think I have answered that.

4027. Are there any differences scientifically and technically in the operation of the pot and patent forms of stills?—I think not. Taking it broadly I think there is no difference. I have dealt with that rather fully in a paper on the distillation of whiskey, appearing in the Journal of the Institute of Brewing in 1906, and I think I referred there pretty fully to the similarity between the two processes.

4028. What are the passages you refer to?—On page 505, I say: "Regarded from a technological point of view, it is clear that the Coffey still accomplishes in a single and continuous operation that which requires a series of intermittent operations by way of the pot still, and that it has the advantage over the latter in the matter of economy of heat. Separation, rectification, and concentration are the objects of both forms of distillation, and the processes indeed, notwithstanding the widely different forms of the apparatus employed, are in many respects curiously similar. The analyser corresponds to the wash still of the pot still process, the rectifier to the low wines or spirit still. A liquid corresponding to the low wines of the pot still may be obtained (and is obtained at the sampling stage, as a matter of fact) by tapping the low wines vapour pipe D. The 'ether' obtained from the top of the rectifier corresponds to the foreshotts of the pot still process, and the 'hot feints' of the 'patent' still to the feints of the older process. Moreover, feints are run directly, as has been stated, at the beginning and end of the distillation period." In the patent still they run feints at the beginning until the still steadies itself, and at the end the still is growing very weak. I think that really, in principle, these two forms of still accomplish more or less the same thing, but in a different degree. I will hand in a copy of this paper formally. (*See Appendix F.*)

4029. I should like to ask you, can the whiskey of the pot still type be made in a patent still?—Do you mean in a Coffey still?

4030. Yes?—I may say this, that I have seen samples of spirit made with peated malt in a Coffey still, and the peat flavour was very strong, and it was indeed very similar to a pot still whiskey. I do not think it was a perfect pot still whiskey, but my view of that matter is just this, that the Coffey still was never designed to produce a pot still type of whiskey, but I think that even at the present time if the distillers were put to it they could by altering the Coffey still probably produce something very analogous to a pot still whiskey. But I have always held, and for once in a way my prophecy has been right, that if one were put to it to produce in a single operation in a single still a whiskey of the type of the pot still whiskey, it could be done, and it has been done. I will now, if you will permit me, show you samples of this whiskey, and also refer to the analyses, and particularly this whiskey which I put in under the heading: "Continuous still. Appendix No. 2." (*See Appendix E, II.*). I would like first of all to show you a drawing of this still. This is the working drawing of a still in which a whiskey of the pot still type absolutely similar to Highland malt is produced in a single operation.

4031. You would not call this a patent still?—I should call it a patent still, but it is not a Coffey still. The operation is more or less the same.

4032. A continuous operation?—Yes. The wash is run from the wash charger to this wash heater. This wash heater is heated by the spent wash first of all which comes from the still through this pipe, and secondly by the waste steam which is used for heating the still. From the waste heater the waste rises to about *this* point in the column.

4033. (*Chairman.*) By what force?—By gravity. The wash charger is higher. It rises to *this* point in the still, and this column *here*, into which it falls, is to all intents and purposes the same as the analyser in the Coffey still. It then falls down in the same manner as in the Coffey still, and is heated by the steam coil. At the beginning of the operations a certain quantity of water is put into this still, and it is boiled up, and that practically corresponds to the steam in the Coffey still. They do not want to start the apparatus dry. I do not know that there is anything more to say about that still except that it runs very little foreshotts—in fact, only a very few gallons until the still steadies itself. After that it runs whiskey continuously until the wash is exhausted.

4034. Where is this still working?—I will show you the samples presently, my lord, which have labels upon them, but I should not like to state it publicly.

4035. (*Dr. Adeney.*) Have you any objection to handing in a copy of that drawing?—I am afraid that is the only working drawing the distiller has, and without his permission I should not like to do it; but I dare say he would have a copy made for the Commission.

4036. It would be a great convenience if we had it?—I am quite sure he would allow a copy to be made for the Commission, but I cannot hand it in without his permission, because this is the only working drawing of that particular still. Now, if you will permit me, I will show you a sample of the whiskey. By removing this band and this envelope on the bottle you will see the name of the distiller, and if you go up to Scotland you might be able to see it yourself, or in any case you will be able to have confirmed what I say through an official source. I will pour out a sample from this bottle and dilute it for you. Of course, this is a new spirit.

4037. It requires maturing?—Yes.

4038. (*Dr. Horace T. Brown.*) What sort of mash was this made from?—Pure malt.

4039. (*Chairman.*) It is entirely a question of process you are on now?—Yes, my lord.

4040. (*Dr. G. S. Buchanan.*) I will not take off the label, but for the purpose of having it on the Notes you might tell us whether this is an old established still that has been going on for some years?—Oh no, it is a new process, and it is still experimental. It is about the size of 500 gallons.

4041. (*Chairman.*) Is it more economical to work in this way?—Undoubtedly. You would use less coal and less labour. Then with regard to the figures I have put in in connection with that still, I have given first of all an analysis of the spent wash. The total of the volatile impurities in the spent wash is 129·4, which is using the oxidation process of Allen-Marquardt.

4042. (*Dr. Adeney.*) That is per 100,000 of the liquid?—That is per 100,000 of the liquid. I leave the non-volatile acids out of the question. I think we may take it roughly that the amount of whiskey is about one-tenth of the volume of the original wash. If we assume that the whole of those bye-products were to go into the whiskey, of course we must multiply the figure 129 by 10. I think that is a logical process of reasoning which would make the bye-products in the whiskey about 1,300. I have got analyses then of the foreshotts and of the new whiskey, and you will see, I think, that it corresponds chemically, as well as to the nose and flavour, entirely to a Highland malt type of whiskey. Then I give more figures on the second page of the table.

4043. Would you describe a little more fully how you have dealt with those figures?—"Analysis of foreshotts and whiskey. Note.—There is only a very small quantity of foreshott run. No feints are obtained, for after the still has steadied itself it runs whiskey continuously until the wash is exhausted." Then I give the analysis of the foreshotts in parts of 100,000 of absolute alcohol and also in bulk of liquid.

4044. (*Dr. G. S. Buchanan.*) May we have a copy of these figures handed in, so that they may go upon the notes?—Certainly. Then I also, in addition to the Allen-Marquardt oxidation method, employed Dr. Teed's process. I call it Dr. Teed's process, although he has not contributed anything to the literature on the subject, but there are so many varieties of this colorimetric process that I desire to show that this is the particular variation of the process which he uses as described by him. In that case I got a figure in the foreshotts for higher alcohols of 204, and in the whiskey of 160. Leaving the foreshotts out of account, as the amount was small and the actual quantity was not known, it will be seen that bulk for bulk roughly eight times as much of the impurities—I use the word "impurities" because it is the shortest of all these expressions—are eliminated in the spent wash as passed into the whiskey. Then I give comparative analyses of the continuous still manufacture of two different periods and the ordinary pot still working at the same distillery.

4045. (*Dr. Adeney.*) And the same materials?—Oh, yes, it is malt throughout. You notice, first of all, the great similarity in the product in the continuous still in March and also in February. In fact, that is the great difficulty; you have to get at the right figures from the same distillery. Then you notice, with regard to the ordinary pot still, at that same distillery the figures are slightly different; the higher alcohols are slightly higher and the aldehydes are about the same. The esters are slightly lower. The total acids are about the same, and the furfural is rather higher. Then I go on, and I also give the higher alcohols by Dr. Teed's method—namely, 160 under the continuous still in March, 132 in February, and 153 in the ordinary pot still. Then lower down I go on to compare the product of the continuous still. I should like to make this one remark that that whiskey which I have passed round to the Commissioners not only is like a Highland malt whiskey, but I am giving not only my own opinion (I have considerable experience of taste), but the opinion of very competent men, that it is not only a type of a Highland malt whiskey, but it is similar to a particular variety of Highland malt whiskey, namely, the Speyside whiskey, and more than that it bears a curious resemblance to a particular Speyside whiskey.

4046. (*Chairman.*) Does Speyside include Glenlivet?—Practically. It is a little bit off the Spey, it is really in the Valley of the Livet, but I think that is rather a distinction that is scarcely made nowadays. The Glenlivet whiskies have more or less the same character as the Speyside whiskies proper, but the point I want to make is this, that it is very remarkable that the analysis of this continuous still whiskey is extraordinarily like an analysis of a new sample of this particular Highland malt distillery to which I am referring, and the flavour is also very like it.

4047. Where would be the centre of the Speyside distilleries?—About Dufftown, I should say. I do not want to make that a definition, but I think that is practically what it comes to. I have here a sample of this other Highland malt which is so very like this continuous still.

4048. What is this?—This is the particular Speyside whiskey which is so very curiously like this continuous still.

4049. (*Mr. Guillemard.*) Is that new too?—Yes. In judging of these things one wants to be something of an expert, because taste is rather a misleading thing.

4050. (*Dr. Adeney.*) Can you hand in an analysis of that?—Yes, it is side by side with the other one.

4051. (*Chairman.*) What is the result of those two?—One has been standing some time now, and the other has been just poured out afresh.

(Adjourned for a short time.)

(*Witness.*) There is one correction I should like to make about the continuous still. I said that sample that I handed in was new. It is not absolutely new, it has been in wood a month.

4052. (*Dr. Adeney.*) Was the old pot still sample also a month old?—No, but the one I showed you to compare with it. The old pot still sample was new: that had not been in wood.

4053. We have had evidence before us to the effect that the impurities in the pot still distillation process are retained, as it were, within the process?—Yes.

4054. Do you agree with that view?—No, I do not.

4055. Do you agree with the view that there is anything eliminated in the patent still which is retained in the pot still?—No, I think it is only a question of degree.

4056. Can you give us any experimental data in reference to this question?—Yes. I should like, in the first place, to refer again to my paper on the distillation of whiskey in the Journal of the Institute of Brewing. You will find it at page 506 and the following pages. I give particulars of an examination of a series of products from a pot still distillery—a Scotch distillery I need hardly say, where I have taken the actual figures of the amount of the wash still charge, the low wines still charge, and the pot ale and spent lees. I have examined the pot ale, spent lees, the low wines and then the mixed feints and foreshotts, whiskey, and foreshott only.

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4057. You hand these in?—Yes. *(See Appendix F, II.)*

4058. Will you give us briefly the results, the conclusions you have come to?—The conclusions I have come to briefly are these: that roughly 63 per cent. of the total volatile products of the wash, apart from the alcohol and the water, are directly eliminated, that is to say, in the spent lees and the pot ale, and of the 37 per cent. which are retained, that is to say, which pass over ——

4059. In the distillate?—Yes, in the distillate only about 10 per cent. actually pass into the whiskey, the remainder passing into the foreshotts and the feints. Then I have in the appendices 3, 4 and 5 some further data.

4060. You hand those in?—Yes, I hand those in. *(See Appendix E, III., IV., and V.)* I do not know whether you wish me to go through any of these.

4061. Will you give us any conclusions which you think are important?—The first appendix is headed "Analysis of products of one distillation of a Highland malt distillery." There the total coefficient in the spent wash amounted to 111, and in the spent lees to 162. If one wishes to compare those figures with the whiskey the spent wash figures must be roughly multiplied by 10, and the spent lees by 2. I think that that is a fair general comparison of the volumes.

4062. You have arrived at that from your own observations?—Yes; I am taking the ordinary methods of distilling. Of course, they vary a good deal at different distilleries; at some distilleries they are running a good deal more feints than another distillery. At one distillery they will run their whiskey a little bit higher than another.

4063. You mean by that, that the alcoholic strength is higher?—Yes. I give the analyses of the mixed low wines and feints of the particular distillery in question, and I have here samples of these mixed low wines and feints of the particular distillery there described. I think you would rather like to see those. They are 63 under proof.

4064. Is that the usual strength for low wines?—Yes; say about 55 to 66. It is usually nearer 60. That is about the usual strength for a Scotch distillation. One has a large volume of wash, and you cannot get a high alcoholic strength in a single operation in a pot still.

4065. What is the usual alcoholic strength of the wash?—I should think it varies from 5 to 7 per cent.

4066. Of absolute alcohol?—Yes, something of that kind, absolute alcohol. The gravity is about 55 to 66, I think, in an ordinary pot still distillation, or something of that kind. Then I give an analysis of the whiskey obtained in this particular case of this particular Highland malt whiskey which, analysed by Dr. Teed's method, gave a total of 253. Then some interesting observations were made in connection with the mixed low wines and feints. The acidity and the ethers were determined directly and also after distillation, and it was found that the total acidity by direct titration was 68, and after distilling the acidity of the distillate was found to be 115.

4067. *(Dr. Horace T. Brown.)* Made up to the same volume, or rather made up to one original volume?—No, both of these are made up to 100,000 parts of alcohol. In the same way the ethers determined without a preliminary distillation were found to equal 109, but after distillation 77. These results very clearly indicate the hydrolysis that takes place by simple distillation by ordinary fire heat and not by live steam.

4068. *(Dr. Adeney.)* That is to say, the hydrolysis does take place in the pot still?—Yes, and I think if you refer to Dr. Bell's evidence before the Select Committee he shows the same thing.

4069. *(Dr. Horace T. Brown.)* How do you determine the ethers without a preliminary distillation?—In this case the liquid is colourless. There is no extract, therefore you can neutralise directly and then run in an excess of alkali. I think that is a fair way of doing it. In this case, also, a simple calculation shows that the quantities of impurities eliminated in the spent wash and in the spent lees (I am leaving aside the foreshotts and feints for a moment) is roughly 10 times as great as that passing into the whiskey. At the distillery in question 100 volumes of mixed low wines and feints yield roughly: Foreshott 7 per cent. (30 over proof), whiskey 20 per cent. (15 over proof), feints 30 per cent. (55 to 60 over proof)—that must be under proof.

4070. *(Dr. Adeney.)* That wants correcting in these?—Yes, it wants correcting in the appendix. And then 43 per cent. of spent lees. Then I give analyses of the residues from an Irish pot still distillery. I do not know that there is any need to particularise those; they practically come to the same thing.

4070*a*. You have handed those in, and they support the calculations which you have stated?—Yes, entirely. Then I give particulars in Appendix 5. There was some discussion, I think, before this Commission as to the actual methods of distillation, and I give there a few samples of actual distillation at Scotch and Irish distilleries which are for the information of the Commission. I do not think there is any utility in going into them.

4071. No, I do not think so?—While I am on that subject I think you will permit me again to refer to this paper, in which I have shown how and why it is that the theory that no elimination takes place is quite impossible; it is a mathematical impossibility, and unless my mathematics are quite wrong (I think it is a matter of simple arithmetic merely), I show there that it is absolutely impossible that no elimination could take place, and leaving aside mathematics, and leaving aside chemistry, I think it may be very simply put in this way: Why should the pot still distiller run foreshotts, why should he run feints, and why should he go to the trouble of running his whiskey at a higher proof than he bonds it at if nothing is eliminated which he does not desire to eliminate?

4072. You do not agree with Dr. Teed?—No, I am afraid I do not.

4073. Not on that particular point?—No; I think it is simply a rule of three sum. I have gone into this question here, and have taken the amount of stuff eliminated in the foreshotts and feints. I have worked it out, and I have found that: "At the end of the season we should, on these lines, be dealing with a spirit still charge containing something like 7 to 8 per cent. of impurities. As the contents of the feints receiver are kept at the end of the season until the beginning of the next, it is obvious that if the traditional theory were correct we should at the end of a few years be distilling feints and foreshotts containing 100 per cent. 'impurities,' and no alcohol at all, and that operations would then necessarily come to a stop, inasmuch as each succeeding distillation would necessarily increase the volume of feints and foreshotts so rapidly that a fresh receiver would be required every few weeks. The above is merely a *reductio ad absurdum* of the theory that 'nothing is removed in the course of pot still distillation.' It is quite evident that distillation could not be carried out on these lines, as the increasing quantity of 'impurities' in the feints would speedily make it impossible to separate any 'whiskey' fraction at all."

4074. Would you give us the reference to that?—It is pages 508 and 509. While I am on that I might perhaps indicate how these impurities come to be eliminated in the foreshotts and feints. Of course, it is plain how they go away in the spent lees and spent wash; it is not there a question of opinion, but it is a question of pure fact. I have here some foreshott. I think these are actually the foreshotts which were examined here which have been preserved in bottle. You will see the character of that foreshott is rather different to whiskey, even if the analytical figures should be more or less the same. You have a large quantity of aldehyde. When I say large, I mean compared with the amount of aldehyde which you could get in whiskey. Of course, the amount absolutely is small. On the other hand, you have a vast quantity of air and water with which it comes in contact, and the result is that part of that aldehyde is oxidised to acetic acid. Acetic acid is much less volatile than aldehyde, and the result is that at the next distillation that which was originally aldehyde passes out in the spent lees in the shape of acetic acid.

4075. And is lost in the process?—Yes. In the same way your esters get hydrolysed in each distillation, and also during the sojourn in the feints

receiver esters are formed, and no doubt you have inter-action proceeding, and other inter-actions between some of the other bodies there. Then another point is this: all these figures which we give here are really merely approximations to the truth. These quantitative figures do not show qualitatively what these substances are. Even if the analyses of the foreshotts and feints and whiskies were the same it would still not show that there was no elimination, because although they may be quantitatively the same, they might be qualitatively different. I think it is obvious that the pot still distiller, who is conservative, does not run his foreshotts and feints, and he does not adopt the process which he does for the purpose of amusing himself. There is certainly something there which he wishes to eliminate.

4076. Have you anything further to add as to the extent to which elimination takes place?—I think that putting it as between the pot still and patent still, roughly, one might say that in the pot still 90 per cent. is eliminated, and in the patent still 95 per cent.—I am putting it roughly. I think it is not a question of opinion, but it is a pure question of fact. I think an examination of a series of samples from any pot still distillery will show the same thing as I have shown here.

4077. Are there different kinds of pot stills to your knowledge?—Yes, undoubtedly, the pot stills in the Highlands, when one goes into the question superficially, appear to be very much like one another at a superficial glance, but when one goes into the question more closely one sees that the variations which one does observe, are rather more important than one would gather. I have here a sheet of drawings which are merely rough sketches which I made some time ago. They are not to scale, but they show some of the forms of the Scotch pot stills; they are rough indications of shape. (*The same were handed in.*) Then the head of the neck of the pot still alone has an enormous influence.

4078. You mean the height of the neck?—Yes. I have known a case where a distillery was making a whiskey which was not what was desired. There were a lot of experiments made; finally, a couple of feet were cut out of the height of the head, and they made entirely different whiskey simply by the cutting out.

4079. The head was lowered?—Yes. Then there are, of course, many stills both in the Highlands and Lowlands (I know of half a dozen myself), where they use a rectifying box. I have here a drawing showing roughly a rectifying box. Here it is much larger than it is because it is not to scale. They will show you what happens, and the effect of that is roughly presumed to be the same as the line arm in the Irish still. I may say that these rectifying boxes are used not at distilleries making a common class of whiskey, but some of the very highest class distilleries.

4080. Producing self whiskey?—Yes. I have a list here giving the prices of new whiskies. It is a chart from the "Wine and Spirit Trade Record." I should like to mark on this one particular whiskey which has that form of rectifying box, which I think will be recognised by anybody as being a very high class malt whiskey. I should like you, if you would, to have that confirmed through an official source. I will mark that particular one and hand it in. You will see that it is a very high class. I ask you kindly not to refer to this. I should like you to have that confirmed through an official source. Then if I might come to the Irish pot stills, of course when one comes fresh from the Scotch pot still to the Irish pot still, one is really amazed. I thought before I had seen them the Irish stills were perhaps a little larger, but I really did not know of the enormous difference between the Scotch pot stills and the Irish pot stills. I have here a sketch of an Irish pot still, which is also reproduced, by the way, in this paper on the distillation of whiskey.

4081. Will you give the reference?—It is on page 499. I have no doubt that the distiller, in the design of this still, had not in his mind any question of chemical fractionation, or anything of that kind, but the result is the same. I think any chemist looking at this apparatus cannot come to any other conclusion than that it must be so. In fact, it is rather an efficient form of rectification, because it is practically what we call a dephlegmation. You have a partial condensation at a constant temperature, which you can vary according to conditions. I should like to examine the products that come back from the return pipe from the line arm but I have not been in a position to do so. I am now speaking from my own observation of a huge pipe of about 30 feet long surrounded by water.

4082. Is that cold water?—I presume at the start it would be cold, but it would not be quite cold, as it gets fairly hot, but even when it gets pretty hot we still have the dephlegmating influence. I think at one distillery I saw a return pipe from the coil as well.

4083. You observed that yourself?—Yes, I have seen that at one distillery. I will put that sketch in. That is a sketch of the Irish still. I wish to make it perfectly clear that I am not reflecting in any way on Irish whiskey. I do not think it has anything to do with it. They make very fine whiskies, and it is because of that apparatus that they make them.

4084. (*Dr. Horace T. Brown.*) Would that be called the ordinary line arm?—Yes, that is the ordinary line arm. Then I have here another drawing of a sample pot still made for an Irish distillery which has a head 40 feet high. I leave it to the chemical members of this Commission to imagine what kind of fractionation you will get there.

4085. (*Mr. J. Y. Buchanan.*) Was the head exposed to the weather?—Yes, partly. Then I have here some photographs that I might show to the Commission. Here is a distillery with pot stills and the rectifying boxes actually working. I will not put them in formally: they are merely for your information. I have some photographs of a pot still plant, but it is not quite relevant to this particular section. I will leave that for the present.

4086. (*Dr. Adeney.*) I think you can hand in analyses showing the different effects of these pot stills?—Appendix 6 shows the comparative analyses of pot stills at the same distillery working with and without a purifier. I may as well say I have made a mistake, and that the heading should be altered. The column headed "Ordinary Pot Still" should be "Pot Still with Purifier." That is in Appendix 6: "Comparative Analyses of Pot Stills at the same distillery working with and without purifier." I should have said, "of the spirit of pot stills." The correction I wish to make is a correction in the headings. It was a slip of my own in drawing out the figures, and the columns are reversed. That is the only change.

4087. You hand in those figures?—Yes. (*See Appendix E, VI.*) I think they are of some interest. I do not know that they are absolutely comparable, because the spirit would be changing from second to second; but you see in one case you have a far larger amount of impurities than in the other, and a far larger amount than in the still with the purifier. That is natural enough because you get more volatile products in greater number to start with.

4088. In what class of pot stills are purifiers?—They are employed both in the Lowlands and Highlands making the very finest whiskies. I might refer again to that particular whiskey and I know of several others. I think I know of half-a-dozen myself where they are employed; they are whiskies well recognised as pot still malt whiskies. There is no question of that, and it is not a case similar to that mentioned by Dr. Teed this morning, where a Coffey still is used, and it is classed as a Lowland malt whiskey.

4089. Are all Scotch pot stills heated by naked fire?—No. I know of quite a number myself. I suppose I have been in about 30 pot still distilleries in Scotland, and I think I know five or six personally where they use steam jackets, or steam coils. While I am on that point might I say this: that we have heard something about the burning products which we get from the still. I do not think those products to which we allude as the burning products are produced by burning at all. Sometimes in the case of pot still you get what is known by the distiller, or in the trade, as a singed, or burnt, whiskey. Now that is quite a different thing from an ordinary whiskey in which you have the ordinary impurities. It has an actual taste of singeing, or burning. On that point, as on a great many others, I have had to modify my opinion. We all thought at one time that the furfural was due to a kind of fire action on the contents of the mash, but I have had to give that up entirely because there is one distillery where I made experiments which

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was fitted with a steam jacket on both the wash still and the spirit still, and the analyses of that particular whiskey come out just about the same as the ordinary analyses. I think I refer to it in my paper on the Chemistry of Whiskey, part 2, under the Lowland malts. It is in the tables on page 11, under Lowland malts, No. 26. There are three analyses there from that distillery, 26, 26*a*, and 26*b*. That is a distillery at which steam jackets are used both on the wash still and the low wines. I think if you look at those you will see that there is nothing really to distinguish them from the other whiskies.

4090. They are good flavour whiskies?—Yes. If you wish I could give you in writing the name of the distillery. If you wish to have it confirmed officially I can give you the name in writing.

4091. That is scarcely necessary.

4092-3. (*Mr. J. Y. Buchanan.*) What would be the temperature of the steam in the jacket?—I think about 30 lbs. pressure.

4094. (*Dr. Adeney.*) Could you tell us in what respects the Coffey still is economical as compared with a pot still in operation?—It is economical, to begin with, because the process is a continuous one; it is not intermittent, there is only one operation, and the result is that you do not have to heat up your materials twice. In the case of a pot still you have to heat up your wash, and then heat up your low wines. Then, secondly, there is greater economy of heat owing to the fact that the vapours that come over are used to heat the wash; and thirdly, it is on a much larger scale, which means economy as regards labour, and so on.

4095. (*Dr. Horace T. Brown.*) I think the most important point we have had from you is connected with the fractionation of the pot still. We wanted some information as to whether there was any fractionation in the first instance; and secondly, to what extent that fractionation took place. As regards the figures you have given in the Institute of Brewing paper, which I have carefully examined, I think you have made out a case for the fractionation. I am not equally certain about some of these figures that you have handed in in the appendix. We have not had time to work them out. Now with regard to this paper of the Institute of Brewing, did you attempt in the first instance to ascertain the amount of bye-products in a sample of the wash by distillation in your laboratory?—No, I did not do that. My reason was this: that the wash is a pretty complex mass, and contains a lot of solid matter, and so on, and it occurred to me, after all, I could only do in the laboratory very badly what was done in the distillery very well. It is a well known thing, with which I think you will agree, that industrial operations are very difficult to carry out in the laboratory. I thought, therefore, that by distilling wash in the laboratory I should not really get good results.

4096. I do not mean you should attempt to go through the whole process and make an analysis of the fractions which you get in the laboratory, but I want to know whether you actually determined the amount of these substances in the wash in the first instance?—No. I have never actually done that. I have examined the wash frequently.

4097. With regard to the actual amount of impurities produced you have determined those from the amount left in the spent wash, the amount left in the spent lees, the amount left in the foreshotts, and the amount left in the whiskey?—Yes.

4098. Taking a note of the various volumes of these separate portions?—That is so.

4099. You have not been able to put that in the form of a balance-sheet, as it were, have you?—No, I have never actually started from the wash.

4099*a*. Can you tell us how you determine in the spent wash and in the spent lees the actual amount of residual higher alcohols?—In the case of the spent wash and spent lees, of course I knew at once that they must be very dilute liquid, and that therefore we must take a much larger quantity for the estimation than we would in the ordinary whiskey, and whereas we are content with, say, 100 cubic centimetres in the case of ordinary whiskey, we took—I think it was 300 or 500 in the case of spent wash and spent lees. I think Dr. Teed takes 20 cubic centimetres by his process, and that may possibly account for the fact that he occasionally has not found anything. He only takes 20 cubic centimetres, and he will correct me if I am wrong. When you are dealing with such a very dilute solution as spent lees or spent wash you must obviously take much larger quantities. Those were distilled first of all with naked flame and then with steam, so as to get over the higher boiling point bodies with ease, and to make sure you got them without burning and without any secondary reaction of that kind. Then the liquid was made up with brine in the ordinary way, and was extracted with carbon tetrachloride, as in the Allen-Marquhardt process. In the case where the colorimetric process was also used they were first diluted up to 50 per cent. of alcohol.

4100. You distilled practically to dryness?—No, I rather avoided that, and used steam.

4101. Did you add a further amount of water from time to time?—No, I used steam continuously.

4102. Until your distillate gave no further traces of the higher alcohol?—Yes.

4103. The amount of higher alcohols you found in the wash was 50 parts per 100,000, or rather more, and I think Dr. Teed found in some cases about the same amount in spent wash?—I should think 50 parts would be rather high myself.

4104. Have you found them, as a matter of fact?—I do not know that I ever found anything quite so high as that. You have to multiply it by ten if you convert it into whiskey. I think I found something approaching that. I do not know that I ever got actually quite as high as 50. I have one here 54.

4105. Let us take 50 for the purpose of argument. Supposing the whole of the 50 were thrown upon the alcohol originally present in the wash, what would that represent? I was trying to work it out yesterday, and it seemed to me that it would amount to something like that. Then, of course, you have to decrease, in the first instance, the 50 to about 33 to correspond with the diminution of volume due to the fact that you have a lot of water in the alcohol that has come over?—Yes.

4106. That 50 becomes 33?—Yes.

4107. May we take it that the wash itself before distillation would contain at the outside 6 per cent. of absolute alcohol?—Something of that kind.

4108. That, I think, would bring the higher alcohols expressed per 100,000 of the original alcohol in the wash to about 550 parts per 100,000?—Yes, that is about it.

4109. What did you estimate was the amount of those bodies present in the wash before distillation, all told?—In the wash?

4110. Yes, before distillation. This is the residual. What do you maintain has come over into the foreshotts, whiskey, and feints?—About 10 per cent., I should think. The amount that passes out. I have calculated it together in the pot ale and spent lees. I do not think I ever calculated it out in that way. If you take your whiskey having 300 parts, say, that would be 150 parts for the liquid, then your whiskey fraction would be about one-tenth part of the volume of the spent wash. I think, perhaps, one could work it out in that way.

4111. The point is this, do not the higher alcohols of the original wash bear a higher proportion to the ethylic alcohol of the original wash than they do in the finished whiskey—a larger proportion than occurs in the finished whiskey?—I think there is no doubt whatever about that.

4112. So that there is considerable fractionation there to start with?—Very great.

4113. You maintain broadly that there is very considerable fractionation going on in pot still distillation?—I think there is not the slightest doubt about it. Regarding it from a purely theoretical point of view, I think there must be.

4114. When you have a certain amount of bodies rejected in the foreshotts, and a certain amount of bodies rejected in the feints, and these are all returned into the subsequent distillation, it is very difficult for a chemist to accept the view that there is no accumulation going on which would not ultimately stop the whole process if it were carried far enough?—I think there is no doubt about it that all

of us, when it was the fashion to think there was nothing eliminated in the pot still, took it for granted, but when one did go into it the absurdity of it became apparent.

4115. Have you any positive proof that when the aldehydes are oxidised to acid in the process, you get a large quantity of relatively non-volatile acid in the spent lees? That must come from somewhere?—I have never actually followed the aldehydes in any particular run. That is a very difficult thing to do.

4116. You further remark that there is hydrolysis of the esters in the pot still process just as there is in the patent still process?—Yes; there is no doubt about that. There are some figures on the point in this paper of the Institute of Brewing, and also there are some further figures in my appendices. I do not wish to rely upon other people, although I certainly do pay some attention to the literature of my profession, but if you will follow that, Dr. Bell, before the Select Committee, points out the same thing. On page 509 of my paper in the "Journal of the Institute of Brewing" I say: "Hydrolysis of ethers by simple distillation (results expressed in parts per 100,000 of actual liquid). Spent lees 40·4 before distillation, 28·6 after distillation; low wines, 70·8 before distillation, 62·9 after distillation; whiskey, 86·5 before distillation, 81·5 after distillation; foreshott, 396·8 before distillation, 368·2 after distillation." From that you will see they contain appreciably less ethers after distillation than before distillation. I may say I have confirmed that over and over again in the laboratory where we have had a new whiskey without any colour and without any extract. I have determined it both before and after distillation, and we have always got it less, and always got the acids higher. That has led me, as a matter of fact, not to estimate the volatile acid in the spirit by the distillation, but to do the total acid and then the residual acid, and take the volatile by the difference.

4117. Is that a perfectly safe way, do you think?—Yes, I think so.

4118. Do you think it is beyond criticism?—It is not, perhaps, beyond criticism, but I think it is better than the other. In the same way I estimate the alcohol in spirits containing only tenths of one per cent. of solid, not by a distillation, but by taking the gravity of the alcohol, and then allowing for the obscuration. The obscuration is so slight that it amounts to nothing practically, but you get a safer figure. If, however, you distil such a volatile liquid as alcohol you are bound to get some slight loss.

4119. You say there is no difference in principle between distillation in the pot still and distillation in the Coffey still?—I think not.

4120. But in the Coffey still you have the removal of some of the products in a visible and tangible shape?—Yes, in a Coffey still the products are removed in a manner visible to the eye and in the pot still not visible to the eye. I think it is that which has led very largely to the view that in the pot still nothing is removed and in the patent still (the Coffey still) relatively more; but then you desire to do so.

4121. I suppose your views have undergone some modification since you began this work. We were talking yesterday about an article, which I think is signed by yourself, in the "Encyclopædia Britannica," on Spirits, dated 1902, where your views seem to be scarcely in accord with those you hold now. I have no doubt you will be able to give some explanation of that?—Yes, I do not think I necessarily agree with the interpretation which Dr. Teed placed on what I stated in that article, but I really do not think it is worth while arguing about for the simple reason that the article was written in 1901, and as the result of my scientific and other investigations, all of which have been made since those articles appeared, I have entirely altered my view on the matter referred to. I do not mind admitting it for one moment. I think a scientific man is entitled to alter his views on subjects as he gets more information and does more work. I do not mind admitting that at one time I held fairly strong pure malt views.

4122. When did you begin to work specially on the chemistry of whiskey?—I began to work specially on the chemistry of whiskey, I think, in about the year 1899 or 1900. I might point out that Dr. Teed has not referred to my later scientific publications, in fact. I think Dr. Teed does not care to read the literature on the subject, and does not care to speak to other people on the subject, but relies entirely upon himself. That is a matter entirely for Dr. Teed, but I should like to point out, as he lays particular stress upon the articles in the "Encyclopædia Britannica," that I have written a series of articles for the next edition of the "Encyclopædia Britannica," the 11th edition, which is not yet published. I may, however, say that these articles were written and sent in before this Commission was appointed, and I have, in view of the copyright of an unpublished article, obtained the special permission of the proprietors and editor of the "Encyclopædia Britannica" to read to the Commission extracts from the new article.

4123. Is that necessary? I suppose they embody your present views?—There are one or two passages which, if you think it is necessary, I will read. I have put them in my *précis*, but there are one or two matters which I think might be interesting to the Commission.

4124. Some new facts or new views?—Yes, new views. First of all, under the article "Whiskey" I define it or refer to it as "a potable spirit distilled from cereal grains." Then I say: "Scotch whiskies may be broadly divided into two main groups, namely (*a*) Pot still or malt whiskies, and (*b*) Patent still or grain whiskies." On page 3 of the manuscript, I say:—"Patent still, or grain whiskies are, as a class, lighter in flavour and 'body' than the pot still types. . . . Some controversy has of late arisen as to whether these patent still spirits have a right to the name of 'whiskey' or 'Scotch whiskey,' but although, no doubt, this controversy is largely due to conflicting trade interests, it has also, in the author's opinion, been caused by a very general misconception as to the true character of these whiskies. The idea that they are true 'silent' or 'neutral' spirits—that is, alcohol and water pure and simple—is quite incorrect. They possess a distinct flavour which varies at different distilleries, and analysis discloses the fact that they contain very appreciable quantities of these 'secondary' products which distinguish potable spirits from plain alcohol. Indeed, as a result of an extensive investigation on the question by the author, it has been shown that the relative proportion of 'secondary' products in Highland malt, Lowland malt, and 'grain' whiskies respectively is, roughly, as 3:2:1." Below this I give a table of analyses which is headed "Composition of Scotch Whiskies," and in which the grain whiskies are included. Then I say under the article "Spirits" on page 42 of the manuscript: "It is sometimes stated that the patent still does not produce whiskey, but merely plain spirit or alcohol, but as a matter of fact this is not the case. It can be so worked by selecting the proper materials and by running the still in a particular way, as to produce an article which is distinctly a potable spirit of the character of whiskey. . . . It is, however, quite impossible to obtain from the Coffey still a really plain or silent spirit such as that produced by some of the continental stills." Under the heading "American Pot Still Whiskey" (page 40 of manuscript) I draw attention to the fact that some of these whiskies are made by means of live steam, in the following terms:—"Distillation is sometimes carried out with naked fire, but more generally by means of steam which is passed into the wash (termed beer in America) either in a free state or by means of a coil. . . . . The stills generally employed for making whiskey by this process contain three compartments situated above one another and connected by means of a curved pipe. Live steam is blown into the lower compartment which causes the wash to boil. The vapours go up through the curved pipe into the next compartment and so cause the contents of the latter to boil. The vapour from the second compartment then passes up into the third in the same manner." I also desire, as it is particularly relevant, in my opinion, to the inquiry which the Commission is making, to quote from the article on "Brandy." Under the heading "Adulteration" (page 5 of manuscript) I make the following remarks:—"A good deal has been written about the preparation of artificial brandy by means of the addition of essential oils to potato or beetroot spirit, and it is more than doubtful whether this practice was really ever carried on on a large scale formerly. What undoubtedly did occur was that much beet, potato, or grain spirit was used for blending with genuine grape spirit. Prosecutions under the Food and Drugs Act by certain English local authorities in the year 1904 resulted in the prac-

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tical fixation of certain chemical standards, which, in the opinion of the present writer, have resulted in much adulteration of a type previously non-existent. There is no doubt that at the present time artificial esters and higher alcohols, etc., are being used on an extensive scale for the preparation of cheap brandies, and the position, in this respect, therefore, has not improved. Where formerly fraud was practically confined to the blending of genuine brandy with spirit other than that derived from grape, it is now enhanced by the addition of artificial essences to the blend of the two spirits."

4125. This is a change of view on your part which took place some time between 1902 and 1905?—I think I began to change my opinion largely about 1904.

4126. In 1905, in your Second Edition of "The Chemistry of Whiskey," you had already changed your opinion in so far as you would not admit that the terms "patent still spirit" and "silent spirit" are synonymous. I think that is what it amounts to?—I think I may say that that really is the root of the whole trouble, that I, in common with others, at one time believed that the term silent spirit and grain spirit, patent still spirit, and plain spirit, all really referred to one and the same thing. I think even nowadays there are people who might know better, but apparently do not know better in that regard. They do not know that these various classes of spirits made in a Coffey still, and other stills, are by no means the same, and that they differ very materially from one another. I think I am correct in saying that you had evidence here from a Mr. Pheysey, who, I think, is the manager of the Army and Navy Stores Wine Department. I think he made some remarks with regard to the fact that patent still spirit did not alter in glass, and that pot still spirit did. I do not agree with that, but that, however, is outside the point. Naturally I infer that he was referring to Scotch patent still whiskey. I think I am correct in my interpretation of his evidence, that when he was examined on that particular point he said that this particular spirit which had not changed in glass was a highly rectified German spirit.

4127. That is so?—I think Mr. Pheysey does not even at present really appreciate these differences. I point out that really that is where the whole trouble lies, that people do not recognise these differences in the so-called patent or silent spirit.

4128. Now in connection with the interesting account you gave us of the continuous still. I suppose that would not be recognised as a pot still by those who framed the definitions of whiskey which have been before us?—I really do not know. Dr. Teed yesterday said if a still was produced which would produce by a single operation a pot still type of whiskey, he would be reduced to a state of helpless despair. I think I have rather reduced him to that, or I ought to have. I must say if they object to the process, *qua* process, I presume they would not be satisfied.

4129. Is it possible, in your opinion, to produce from the Coffey still a product which has, in a higher degree than at present, the characteristics of Scotch whiskey?—I think there is no doubt about that—not the slightest.

4130. It has not been shown, has it?—I have seen samples myself of Coffey still spirit made with peated malt, and you got the reek of the malt there very strongly.

4131. If they can do that, why do they want pot still spirit at all?—I think up to the present day they have been content with the position that the pot still has produced one type of whiskey satisfactorily, and the patent still has produced another type satisfactorily; and either they have not bothered about it, or until the present day nobody has really produced a still which would continuously produce whiskey of the pot type, and it has been left to the inventor of this particular still which, personally, I think should be successful on a large scale.

4132. This is something new between a pot still and a patent still—it is a continuous still?—Yes, as far as apparatus goes. As far as the spirit goes, it is undoubtedly a type of Highland malt whiskey.

4133. The question is still left open, whether it is possible to produce such whiskey as that by a Coffey still as it now is?—I rather think if the Coffey still people were put to it they could, even with a Coffey still, or a slightly modified Coffey still, do the same thing.

4134. You have never seen it?—I have never seen it, and I think it would give a lot of trouble.

4135. (*Dr. G. S. Buchanan.*) The still you speak of is at present only being worked on an experimental scale?—Yes.

4136. We heard something from one of the witnesses who was speaking of the advertising of Cambus, who said that it was rather a strategic sort of an advertisement. This is not a strategic still?—No. I am glad you have given me an opportunity of saying this. The suggestion that this should be produced before the Commission came entirely from me. This whiskey came to me for my examination and for my opinion of it. I at once saw the value of it from the point of view of this Commission, and asked permission to produce it. I think it would be quite easy to produce evidence that that is so.

4137. I do not doubt it for a moment. The object of the still is, I take it, to try and produce a good malt whiskey more cheaply and more economically than is done by any pot still that is known to you?—Yes.

4138. At present, as far as cheapness and economy is concerned, it is in the experimental stage?—Yes; but there is no doubt that the economy must be great.

4139. I will now go back to the point you raised at the beginning of your evidence on this section of your *précis*. With regard to the distinctions between the different kinds of spirit, whiskey, or grain spirit, you said, I think, that the matter was not comparable to the case of milk and water, or butter and margarine, or anything of that kind, because we had to remember that the whiskey had not got a food value; there is no question of health involved; and there is in your opinion no question of fraud. In the first place as regards the food value, would it be universally recognised that alcohol in that form had no food value?—I presume that the amount of alcohol is practically the same in both cases.

4140. You regard it merely as a question of alcohol?—As far as food value goes, I should say so, although I do not wish to express an opinion on purely medical questions.

4141. There is the advantage of the bye-products and flavours in regard to the effect which they produce upon the consumer, and the effects which any condiments have—that is an important factor, is it not?—Yes, I think it is, but in this way, that I think every consumer will suit his own palate, and the whiskey which suits his palate will do him most good. That is my view.

4142. It may be desired in a particular instance to have a stronger condiment effect, or to get a spirit which has a stronger effect as a condiment than another. The consumer might wish to know where to get a spirit which answered those requirements?—No doubt he can get it if he wants it. There is no difficulty about getting pure malt whiskey. There are plenty of them advertised.

4143. If he can be sure that it is a malt whiskey?—I most distinctly object, as I think everybody does, to describing a whiskey as pure malt whiskey which is not pure malt. I am not upholding anything of that kind. In the same way, I object to calling whiskey Highland whiskey if it is not Highland.

4144. You have no objection to making a clear differentiation of what is a malt whisky?—In what way?

4145. With regard to the description. At the present time, as you know, a man may describe as malt whiskey a whiskey which is not malt whiskey, and you think that he should be protected in calling it malt whiskey?—Yes, I think if a man calls a whiskey a pure malt whiskey it should be a pure malt whiskey.

4146. (*Chairman.*) Yes, that is the point. You think a man who makes a pure malt whiskey and calls it pure malt whiskey should be protected as against something that is not pure malt whiskey?—Yes, I agree with that absolutely.

4147. (*Dr. G. S. Buchanan.*) With regard to the analogy and your argument that the two spirits are so much the same that you do not think any question of fraud arose. Could not you apply

that to many other things? For instance, say raspberry jam consists, as to a quarter of it, of apple pulp. The food value is the same, but it is generally held that a man who mixes apple pulp with raspberry jam should declare that fact to the purchaser?—In that there is no difficulty in the mind of the public. I am not expressing an opinion on this particular case, but I think with regard to the intent to deceive there is no difficulty in the mind of the average man in the street, because there is a great difference between an apple and a raspberry; but the man in the street does not appreciate the difference between a pot still whiskey and a patent still whiskey.

4148. Let us take as an example honey mixed with glucose. They are very identical products, are they not?—Honey is largely invert sugar, I think. It is rather a different thing. Also honey is a natural product, not a manufactured article.

4149. I do not wish to labour the point, but there are parallels under the Food and Drugs Act in which labelling or declaration is usually considered necessary?—I quite agree, but I do not think there is any exact parallel to this case, because I think in such cases as you have mentioned there is undoubtedly an intent to deceive, and the consumer would know the difference. He knows the difference between a raspberry and an apple, but he does not know much about glucose perhaps.

4150. He would not know it by flavour in his jam? —But he knows there is a difference in the manufacture. When putting apples into raspberry jam it is doing something (I am not saying whether it is right or not, because I do not know anything about jam), which he knows if he was asked about it he is putting in something which does not agree with the name of it; and the consumer would distinctly know the difference.

4151. If he was challenged about it he would bring half-a-dozen people to say that it improved greatly the flavour of the jam and pleased the public.

4152. (*Chairman.*) It is a question which is constantly coming before magistrates, or the persons who have to administer the law, namely, whether a person has obtained what he has asked for. Does it not resolve itself into that?—Yes. It is a dangerous thing to generalise in these things, and each case has to be taken on its merits.

4153. (*Dr. G. S. Buchanan.*) One would go one way and another one another?—Yes.

4154. Now I want to ask you a question with regard to your distillation experiment which showed the fractionation which took place that is given in the Journal of the Institute of Brewing in 1906. It seemed to me a very valuable and instructive experiment. In reading it myself I felt that it would certainly be an advantage to my understanding to know what had happened in the case of the distillation of the low wines. That is the second distillation, is it not?—Yes.

4155. The first distillation we can dismiss, as that was comparatively simple. There was a wash-still charge of 3,868 gallons, and it produced 1,403 gallons of low wines, and so much pot ale?—Yes.

4156. With the second distillation, the low wines still charge, you take 1,323 gallons, which yielded 110 gallons of foreshotts, and 170 gallons of whiskey, and 390 gallons of feints at certain alcoholic strengths. Presently you give us the figures per 100,000 of the liquids examined for volatile acids, and so forth. I feel it would help one very much if one knew the actual quantities respectively of alcohol and of total acid and volatile acid, ethers, of higher alcohols, and so on, which were in each portion of the distillate? —I think I have given you those on page 507.

4157. They are not the actual quantities, but the proportions per 100,000 parts of the liquid examined? —And also per 100,000 parts of alcohol.

4158. Have you the absolute quantities?—I have worked it out a little further on.

4159. You have worked it out in the total impurities, taking the whole impurities together?—I have worked it out on page 510.

4160. Yes, for all the impurities together, but in order to follow your argument as to what happened to the higher alcohols, and what happened to the aldehydes, and so forth, I wanted to know what actual quantity went into the still of these articles, and after distillation what actual quantity went into the feints, what actual quantity went into the foreshotts, what actual quantity went into the whiskey, and what actual quantity went into the spent lees—of each constituent?—I think it is purely a question of arithmetic.

4161. Would it not be a very much more helpful way of enabling one to understand what had happened than putting it in these parts per 100,000?—No; I think you have to work it out.

4162. You have at present to draw conclusions from a number of figures relating to different volumes?—That is exactly why you have to work it to a common denominator.

4163. Would it be possible later on (I think it would help me personally very much) to construct a table, taking your figures on the top of page 507, and give us the actual quantities corresponding to these parts per 100,000?—Yes; I think it could be done. I think it is only a matter of arithmetic.

4164. I have worked it out in a table here which I shall be glad if you will check?—I should like to check it. You are getting changes in these things at every distillation.

4165. That is exactly it; and it is exactly that which I wanted to follow up. I find a difficulty in drawing conclusions merely from the rates. Can you tell me about the amount of alcohol that was present in the low wines charge in that distillation?—The low wines contained 20·19 per cent. of alcohol, I think, which is about 66 under proof.

4166. (*Dr. Adeney.*) 269 gallons on the still?—The low wines charge on 1,323 gallons and the amount of alcohol is given under the low wines table at page 506.

4167. (*Dr. G. S. Buchanan.*) I want to know the absolute amount of ethyl alcohol that was present in the low wines still charge of 1,323 gallons, what amount of alcohol was present in the 110 gallons of foreshotts, 172 gallons of whiskey and 390 gallons of feints. I did a rough reckoning of that just now, and I was unable to make the figures quite square. As I made it there was more ethyl alcohol present in your foreshotts whiskey and feints combined than in the low wines still charge with which you started?—I may say that I believe those figures were the official figures at the distillery.

4168. You might work that out for me at the same time as the other table?—Yes, I will do so. Those were the figures given to me, and I think those were the figures which agreed with the Revenue charge.

4169. I could not make anything like an equation. You would expect an exact equation with the alcohol? —Yes.

4170. That would be one thing that would add up no matter what had happened to the rest?—Yes, certainly. I do not think the distiller would allow any alcohol to remain in his spent lees.

4171. One other question with regard to this experimental distillation. I understand that in this second distillation with low wines you put them into the still without the addition of any foreshotts and feints from a previous distillation?—Yes.

4172. The ordinary practice as I understand is that you get a mixture of so much low wines, and so much foreshotts and feints in the last distillation?—It is a long time ago, namely 1906, but I rather think this was a case where we get low wines in the previous charge. It was a case where I particularly wanted something of that sort.

4173. You wanted to get as simple conditions as possible?—Yes.

4174. What you have done is practically what you would do if you started with a new still that had never been used before?—Yes, as far as I remember I think those were the conditions. It is rather a long time ago. I think those were the conditions in that particular distillation.

4175. With respect to this whiskey which was produced in this case you worked out all the impurities together, and it only contained 10 per cent. of what it actually started with in the wash still. That

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whiskey was in one sense a somewhat abnormal whiskey, was it not?—No, I think not, not at all.

4176. If ordinarily you got an addition of rather concentrated foreshotts and feints added to your low wines still as the material from which you produce the whiskey, and then you have, as in this case, no addition of feints and foreshotts, it would make some difference, would it not?—It might make a slight difference, but then you would probably allow for that in the distillation. The distiller has to exercise some discretion as to the manner in which he runs his still.

4177. A distiller starting with a new still?—Yes, he would run it slightly differently.

4178. With regard to the differences between the pot still distillation and the patent still distillation, comparing, we will say, an ordinary pot still whiskey with an ordinary patent still whiskey at the present time, I gather from you there are differences. Obviously, the products generally are similar, but there are differences of degree?—Yes.

4179. You can say that when you take the higher alcohols together, or when you take the esters together, or the aldehydes together, and so forth, can you not?—Yes.

4180. Do we know enough to be able to say whether the same holds true for individual constituents of these groups?—I can only say, as to that, that our knowledge is by no means complete, and that more knowledge on that point would be most interesting, but, as far as we do know, there are only differences of degree.

4181. I am only asking this for information?—I quite understand.

4182. I should like to know something about the alcohols and esters or aldehydes and the higher boiling points. Would there not be relatively a greater proportion of those produced under ordinary circumstances in the pot still distillation?—In the pot still distillation you would have relatively more of the higher boiling point bodies. The higher alcohols would be rather larger relatively than those in the patent still, undoubtedly. I think Dr. Bell gave some figures on that, if you will refer to his evidence given before the Select Committee.

4183. There might be certain products which were—and, no doubt, are—present in a very much greater proportion in the pot still than in the patent still?—With regard to the furfural, that depends so very much on the manner of distillation of the grain. Take some Irish whiskies, for instance, they contain very little furfural, even as low as one or even less, and I have had patent still whiskies very nearly as high as that.

4184. Could you tell us anything about the effect of time in connection with distillation in the one case and in the other? Has that any influence? As I understand it, in the pot still distillation it takes a very considerable time for the wash to come over?—Yes.

4185. Whereas in the patent still distillation the wash reaches a particular point at which it condenses, and the whole process is over in a fraction of a minute?—No. Practically it works out like this. In the pot still you have a continuous stream of spirit coming over, and so you have in the patent still, only you get it over in larger quantities in the patent still, because it is a larger apparatus.

4186. But it is a more rapid process for any given volume of spirit, is it not?—Yes, because it is a single distillation as against two in the pot still.

4187. But in each distillation?—I do not know that there is much difference there, I really should not like to say.

4188. What I want to understand is whether exposure to a particular temperature of distillation for a longer time would affect the character of the product—whether you would get for instance any sort of combinations or any combinations of bye-products taking place in consequence of either the redistillation or of the time for which it was exposed—the time during which the pot still distillation went on?—I really do not think so. Of course you get modifications in the pot still owing to the second distillation, because you want to eliminate your bye-products and they have to be changed.

4189. The elimination of the bye-products in the second distillation in the pot still—the fractionation—is a chemical process, because it is an oxidation process?—Quite so.

4190. If we wanted to get a more thorough understanding of the actual changes which take place in the pot still distillation, we should want not merely a single experiment such as you have given us here, although that has given us very useful information, but you would really want to have a large series of experiments under various conditions?—You mean to indicate what changes take place in the feints receiver?

4191. Yes?—Certainly. We have done very little of that. It would be most interesting to follow that up.

4192. (*Dr. Adeney.*) You only regard your experiment as a pioneer experiment?—Yes.

4193. (*Dr. G. S. Buchanan.*) You would wish to say we have advanced a great deal since 1904 when you began this new phase of your work, but you would not say we have yet got to the last word of the subject by any means?—We have got to the last word of the subject in this respect, that we know it is absolutely untrue that nothing is eliminated in the pot still. That is a fact which nothing would change.

4194. That fact must be common to all forms of apparatus for distillation of spirituous liquids in which a pot still is used? It is just the same with brandy?—Yes.

4195. You separate the head, the tail, and the body?—Yes. I have here a paper on brandy. I do not know whether it would be interesting to the members of the Commission, but it is a paper that I wrote some time ago in which there are one or two illustrations. My point is purely this, that it has been upheld for a long time that there is no elimination in the pot still and that there is elimination in the patent still, and that in that regard there is a specific difference between the two forms of apparatus. I maintain that that is absolutely incorrect, and it has been proved up to the hilt that that is so.

4196. It is a question really of the degree of fractionation, is it not?—Yes, it is a question of degree.

4197. I think you told us you did yourself at one time advocate rather strongly the view that there was no fractionation. That was at the time when you were taking the pure malt line?—I might have expressed the general opinion that one held in those days, but I have certainly had occasion to alter it as the result of my own work.

4198. That was not contained in your article in the Encyclopædia Britannica?—I do not know whether I refer to it there.

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

NINTH DAY,

Wednesday, 1st April, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Dr. PHILIP SCHIDROWITZ, recalled.

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4199. (*Dr. Adeney.*) Before proceeding with your evidence I should like to ask you one or two questions arising upon the evidence you gave us yesterday. You told us that you watched the Islington case on behalf of a Scotch syndicate?—Yes.

4200. Do you come before us now in that same capacity?—No, I have not been retained by anyone to come here.

4201. You come here as a perfectly independent witness?—Absolutely. I might go further than that and say that with the exception of my establishment no one saw my proof of evidence or my appendices, or anything connected with it, nor did I discuss them with anyone.

4202. Then as to the definition you gave us, or rather a description, as you prefer to call it, of whiskey. I see in one of the papers that you referred to yesterday there is a definition of brandy which seems to me to be a valuable definition. It occurs on page 132 of the paper. Perhaps you would read the words of your definition and then tell us whether you could base a definition of whiskey on similar lines?—"Brandy is a spirit distilled in France, the volatile constituents of which are derived entirely from the grape which contains no added matter of any kind except water, sweetening and colouring matter, and of which the taste and odour are those ordinarily associated with that designation." I think one might fairly translate that into Irish and Scotch whiskey by saying—for instance, we will take the Scotch whiskey—that this is a spirit distilled in Scotland, the volatile constituents of which are derived entirely from cereal grains.

4203. And malt?—And malt.

4204. (*Chairman.*) But you have got a difficulty there, have you not? You would say rice if necessary if it were not for the cost?—I said cereal grains.

4205. But you said in your definition that if it had not been for the cost you would include rice too?—I think rice is classed with the cereal grains.

4206. You treat it as a cereal grain?—Yes.

4207. It is not grown in Scotland?—No. I did not say grown in Scotland. I said distilled in Scotland.

4208. But other witnesses have told us the cereals ought to be grown in Ireland or Scotland?—I do not agree with that at all, any more than hops, which we use for brewing our Burton beers, must be grown in England.

4209. A great many people think they ought to be?—Perhaps it might be better for the hop growers if they were.

4210. (*Dr. Adeney.*) Will you complete your answer that you were giving to me?—"Which contains no added matter of any kind excepting water, sweetening and colouring matter, and of which the taste and odour are those ordinarily associated with that designation." Of course in the case of whiskey one has to remember that the sherry cask comes in, and that possibly there you might get some volatile constituents derived from the sherry cask, therefore I do not think one could perhaps put it on quite the same lines. In what I have just said I should not like to pin myself down to that as a definition. I may say that definition of mine of brandy met with a great deal of opposition owing to my using the word "France." I said that because the brandy is defined by the Pharmacopœia I believe as a French spirit.

4211. There are good brandies coming from various other countries, are there not?—Personally I should feel inclined to jib at the name of "brandy" without qualification.

4212. We had better not pursue that point at present. Then there was another piece of evidence you gave us. You referred to a whiskey being entirely altered when the height of the neck of the pot still from which it had been produced was reduced by about 2 feet. Was the resulting spirit an improvement?—Yes, decidedly. It was so done in order to improve the whiskey.

4213. And it was an improvement?—Yes, it was in that particular case.

4214. The next section of your evidence deals with the character of different classes of spirit. Can you tell us what is the character of the different classes of Scotch whiskies?—Scotch whiskies may be broadly divided into Highland malts, Lowland malts, Campbeltowns, Islays and Grains, the Grains being the patent still whiskies. There is some sub-division. For instance, the Islays are properly speaking Highland malts, I believe, and among the Highland malts proper there are sub-divisions. For instance, there are the Speyside whiskies and the North Country whiskies, and I should describe their characters in this way. Taking the Islays first, those are the most highly peated whiskies; they show a very high peat flavour, and yet they show a very fine and round quality when they mature. Then the Highland malts, taking the Speyside whiskies, are not so big as the Islays, and they are not so highly peated, and they show rather an ethereal flavour than a peat flavour. Then if you take the North Country whiskies they do not show the ethereal flavour of the Speyside whiskies quite so much. They resemble to a certain extent the Islays only in rather a different way. Then the Lowland malts are on the whole rather smaller in flavour and perhaps not quite so fine although there are some very fine Lowland malts. Then finally the Campbeltowns which are perhaps not quite so fine in quality as similar whiskies made elsewhere, but I do not wish to be understood to say there are no fine Campbeltown whiskies. Then finally there are the Grain whiskies, or the patent still whiskies, which are of a very much lighter type, but are in my opinion most distinctly potable spirits and most distinctly Scotch whiskies, and have most distinctly a right to the name of Scotch whiskey. I would differentiate those very sharply indeed from the highly rectified grain spirit or a spirit made from molasses or anything of that kind. They are quite different. It took me some time to educate myself up to it, and it is a very difficult problem, but when one has educated one's palate to this one can easily distinguish the different varieties, and one then appreciates the fact that the Grain whiskies not only possess character, but that Grain whiskies from different distilleries possess different characters. I have samples here of these various types, and I do

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not know whether the Commission would like to see them. Tasting is rather a difficult problem, but I can put them in and you can examine them at your leisure.

4215. (*Chairman.*) What is the operation you propose?—I propose to hand in the samples, if you care to have them, of these different types.

4216. We will have them a little later?—I will hand them in later.

4217. (*Dr. Adeney.*) Have you anything else you wish to say upon that subject?—Not with regard to flavour.

4218. Can you tell us anything about the analytical character of these various classes of whiskey that you have described?—I have published together with my colleague, Mr. Kaye, a very large number of analyses of Scotch whiskies in this paper that appeared in the Society of Chemical Industry Journal, of which I think you have copies, and in addition to those I have some further figures here. In Appendix 7 I have some statistical figures based on the figures in this paper. (*See Appendix E, VII.*)

4219. What is the heading of that Appendix 7?—"Table of the maximum and minimum ratios of the colorimetric and oxidation tests in whiskey of the same classes." Those are really statistical figures based on the figures in this paper. Then in Appendix 8 (*see Appendix E, VIII.*) I have had recalculated the figures handed in by Dr. Bell to the Select Committee of the House of Commons so that they may be comparable to the figures with which we deal now. At the end of that Appendix No. 8 I make some remarks on the figures as they appear to me.

4220. You have given several tables in this Appendix 8?—Eight tables, including new pot whiskies from different distilleries and new patent whiskies. Then old pot whiskies; then another series of pot whiskies; then another series from one and the same Scotch pot distillery at various ages; then a series of old patent whiskies; and another series of old patent whiskies, and then finally a series of foreign patent still spirits. Those were all put in by Dr. Bell before the Select Committee, but I have recalculated them, and I think the table perhaps which is the most interesting is that of the foreign spirits, if I may be allowed to refer to that.

4221. (*Dr. Horace T. Brown.*) There is an evident misprint in the original table affecting No. 8 of your recalculated amounts. I think that figure should be divided by 10 if you look carefully at the tables in the 1890 and 1891 Report. There is a misplacement of a decimal point.

4222. (*Dr. Adeney.*) Here is the original table of Dr. Bell?—You mean it is wrong in the original table?

4223. (*Dr. Horace T. Brown.*) Yes?—I do not know that. I think it is quite possible that it may be so. I think it is possible one might from molasses spirit get something of the kind.

4224. As far as my recollection goes there are not the same number of figures in those as in the other?—Dr. Bell says so at question 3630.

4225. (*Dr. Adeney.*) The origin of that particular spirit was probably beet or molasses?—Yes. I think that is quite correct. May I just make some remark upon this particular table? I say at the end of my tables: "The above tables comprise analyses from 9 (or possibly 12) pot distilleries"—Dr. Bell was a little vague as to the number—"(English, Scotch and Irish) and from 5 (possibly 7) patent distilleries (English, Scotch and Irish; also a series of foreign spirits. As at that time (1891) there were 113 pot distilleries in Scotland and 22 in Ireland, and 13 patent distilleries in Scotland, 8 in Ireland, and 10 in England, making a total of 125 pot distilleries and 31 patent distilleries, these analyses cannot be accepted as representative of the whole industry, but as far as they go they show: That there is very wide variation between different pot whiskies from different distilleries; that there is very wide variation between whiskies from the same distilleries of different years; that this also applies to the patent spirits; that the British patent spirits differ very materially chemically from the foreign patent spirits, and that those figures also bear out chemically the contentions: (*a*) that Scotch grain is not silent, and that (*b*) it is a type of whiskey. It will be noticed both in these analyses, as also in those of Schidrowitz and Kaye, that in the Scotch patent spirits, the higher alcohols, as a whole, are high as compared with the ethers—this also applies to the pot whiskies—whereas in the case of the foreign spirits, they are either almost silent, or, where they contain appreciable quantities of bye-products, the ethers are relatively very high as compared with the higher alcohols, that is to say exactly the reverse. The foreign spirits which are practically silent (Nos. 6, 7, 9, 13, 16, 17) are probably the highly rectified 'Hamburg' potato spirits, those containing appreciable amounts of ethers may be the molasses and beet spirits, those with very high amounts of ethers (Nos. 8 and 14) probably from sugar cane molasses." I think I may be wrong there because Dr. Bell says it is a spirit for methylation.

4226. With regard to the composition of the grain spirit. On analysis you would have no trouble in referring to it as a grain spirit yourself? It would not be silent to your judgment?—No, certainly not.

4227. (*Chairman.*) What do you say is the proper meaning, according to you, that ought to be applied to the term "silent spirit"?—I think the word "silent" is a comparative one, and strictly speaking of course it should apply only to absolute alcohol. But the word "silent" is used comparatively, and I will refer to that a little later on with your Lordship's permission. Then Appendix 9 contains some further analyses of patent still whiskies. (*See Appendix E, IX.*) I have two samples which were purchased in Glasgow which were sold there as whiskey in bottle. One was Cameron Bridge and the other was Cambus. I may say I saw two shops in Glasgow where the windows were practically full of these whiskies bottled and described in this way.

4228. What do you include in the term "these whiskies"?—One was labelled: "3 years old grain whiskey. Cameron Bridge, Fife."

4229. That was patent still?—Yes. Then there was the name and address of the retailer, and this also appears on the label of the second one: "Distilled in 1884. A perfectly pure spirit for medicinal purposes. Cambus grain whiskey." The name of the retailer also appears on that, and there was no attempt to deceive in any way there. It was sold as grain whiskey, and apparently the people must have bought it because I have seen this shop several times. Then there are a few further analyses. I do not know that there is anything particular in them that I need refer to. They amplify the other figures.

4230. (*Dr. Horace T. Brown.*) These are all additional to your part 2?—Yes.

4231. (*Dr. Adeney.*) I suppose you have no objection to these papers of yours being reprinted in our Appendix?—I do not think so. (*See Appendix F.*)

4232. You have no objection yourself?—I have no objection. I do not know whether I am able to speak for the societies who printed them.

4233. I think their permission would have to be obtained, but you, personally, have no objection?—No. I might point to the very great variations that occur, but I think those are pretty apparent.

4234. You mean the variations in chemical composition?—Yes.

4235. Perhaps we might take that a little later on. Now we will pass on to Irish whiskey?—I may say that my knowledge of Irish whiskey is by no means as great as that of Scotch whiskey, but I have some knowledge of it. I have in Appendix 10 a number of analyses of Irish whiskey, and also of American whiskies. (*See Appendix E, X.*) I think the figures speak for themselves. You will see that in the case of the American whiskies the figures are a good deal higher than the figures which we get here.

4236. (*Chairman.*) What figures are higher?—Referring to the bye-products, the so-called impurities. Then lower down I give the averages of a very large number of analyses which Dr. Wiley kindly sent me, and I do not think he will have any objection to my referring to those. He did not mention them as being confidential, and they practically confirm the figures published in this recent paper by Messrs. Crampton and Tolman, although those are quite distinct. The Inland Revenue in the United States is quite distinct from the Department of Agriculture. I do not think there is any need to make any comment on that.

4237. (*Dr. Horace T. Brown.*) What is the meaning of the very high extracts in the American whiskies?—

I do not know that it is so very high because we do not express extracts in those terms at all.

4238. Is not this ·3 or ·4 per cent. of extract on the whiskey?—Yes, that is rather high. I take it that is from the charred cask. You would get a great deal more out of the charred cask than you would from an ordinary cask. That is how I explain that.

4239. (*Dr. Adeney.*) Have you anything more to say on that point?—Not on that particular point.

4240. You have already answered the question as to the patent still spirit being silent?—Yes.

4241. You gave us yesterday some particulars as to these different spirits. Do you wish to add anything to that?—I should like to deal with the terms "silent" and "plain" now. I have here a sample of Lowland malt whiskey, which is a very fine whiskey indeed. I have put an envelope round the bottle in the same way as I did yesterday, but, of course, the Commission can remove that, and they will see what the whiskey is. Although that is one of the very finest Lowland malt whiskies, and if you refer to the chart I put in yesterday you will see it fetches a high price, it is yet called a silent malt whiskey. The word "silent" is used as a comparative term apparently.

4242. (*Dr. G. S. Buchanan.*) Is that some old term in connection with this particular whiskey?—I do not know, but they have apparently used it all the time for their whiskey. Whether they use it now I do not know, but I think so. That sample is some years old now.

4243. (*Dr. Adeney.*) That is a trade sample, I suppose, and would not appear on the bottles going to the retail trade?—I do not know. Very few of these whiskies go bottled to the retail trade. That bottle, as a matter of fact, has not been opened; it still has the Excise seal on it. Then with regard to the term "plain" and the word "spirits", I have here another sample of another Lowland malt which is called plain malt spirits, although it is a pot still malt whiskey. The word "plain" there refers to the fact that it is not peated. The word "spirits," I believe, is merely a synonoym for whiskey. I believe the terms "spirits" and "whiskey" are synonymous in many parts of Scotland.

4244. (*Dr. Horace T. Brown.*) Is that a malt whiskey?—Oh, yes. Those are all pot still whiskies. In fact that is one of the very finest Lowland malt whiskies.

4245. (*Dr. G. S. Buchanan.*) Have the terms "plain" and "silent" in these connections got some special significance for blending?—I do not think so. I think the word "plain" there indicates that it is not peated in that particular case.

4246. (*Chairman.*) Is not this a new practice calling whiskey made in a pot still "silent whiskey"?—No; I think not. This is several years old.

4247. That is exceptional is it not to call whiskey "silent whiskey" when it is made in a pot still?—I put that in to show that the term "silent" is used even in connection with a high-class malt whiskey and is a comparative term. If you open that bottle you will see that is distinctly a very fine whiskey.

4248. (*Mr. Guillemard.*) A comparative term, but in this connection it is difficult to see what it means at all?—I merely put this forward to show the loose manner in which all these terms are used in the trade.

4249. (*Chairman.*) Is there a general use of the terms, or may this not be an exceptional use by some particular distiller?—I should think it is quite likely that it may be so in this case.

4250. (*Dr. Cushny.*) You mean it is silent compared with Islay, for example?—I suppose that is what it is meant to indicate. I do not know why they use the term in that particular case because it is a very fine whiskey. The point I want to make is, that all these terms are used very loosely. The terms "whiskey" and "spirits" and "silent" and "plain", and so on, are used in the most loose fashion.

4251. (*Mr. Guillemard.*) Is this a sample taken by a Revenue official?—I think so.

4252. It has his name upon it?—Yes, I think the Excise seal is on it too.

4253. (*Dr. Adeney.*) Have you finished what you have to say with regard to these different terms?—Yes.

4254. Are there different kinds of patent still spirits?—I think I have pretty well dealt with that. In my view the whole trouble arises from the fact that that is not recognised.

4255. In your opinion is a chemical definition possible of "whiskey"?—I think not. I think it is quite impossible at present—I mean a definition based on purely chemical facts.

4256. (*Chairman.*) Does that include chemical limitations as well as definition? Would you limit the ingredients from which you would make whiskey?

4257. (*Dr. Adeney.*) You would limit any attempt to control the definition by chemical composition?—I was referring to the finished whiskey in this case. What I meant was a definition such as Dr. Teed's, that it must contain 380 parts of impurities. I think that is quite out of the question.

4258. It would be impossible to control any definition of whiskey by such a chemical standard?—I think so. That is the opinion I have come to after a very great deal of work on the subject, and I must say I am rather sorry it cannot be done, because if it could be done I think we should probably get a great deal more work.

4259. Is a chemical definition objectionable on principle, do you think?—I think an impurity definition of the kind suggested by Dr. Teed is objectionable because we only have knowledge so far as it goes of the quantitative nature of the various impurities. I do not think, therefore, that the chemical analysis necessarily conforms to the character of the whiskey. In some cases you get certain types of whiskey—I have known this over and over again—and the chemical figures come out pretty regular, but, on the other hand, you get distilleries producing the same type of spirit where they are very different.

4260. You mean to say the chemical figures lump things together, and the analysis does not distinguish?—Quite so, and that is where a good deal of research would be of great use to the industry.

4261. Then you do not think a chemical standard at all possible?—No, I think decidedly not at present, and I doubt whether it could ever be done. I used to think it could at one time, but I am afraid here again I have had to alter my opinion.

4262. Can you give us any analytical figures to ground your objections?—The figures I refer to are those in my various tables. You will see the variations are so very very wide as between different classes and different distilleries, and variations at the same distillery. I have had samples from the same distillery where the character of the spirit is pretty much the same which vary enormously. In one case I know of a distillery where the figures were a long way above Mr. Teed's definition of impurities, and then I had another sample from the same distillery which was a good deal beneath it. The whiskey was in one case bigger than the other, but the distinctive character of the whiskey was still there.

4263. So the analytical figures as at present obtained should have no relation to flavour?—They can have but little because, first of all, we have no knowledge of the qualitative nature of the "impurities" which we estimate together, and, secondly, there are substances undoubtedly present in whiskey which I have referred to in this paper which we cannot estimate even quantitatively, the terpenes, the ethereal oils, the creosote products, the peat flavours, and so on. We really know very little of them and certainly not enough to try a quantitative estimation.

4264. You would regard then an attempt at a chemical standard as unwise on grounds of public policy?—I wish to limit myself there, of course, entirely to this particular case of whiskey. I personally think it would be very unwise, firstly, because I think it would be creating an offence where no offence exists in my opinion at any rate, and secondly, my experience in the brandy case has led me to think that a purely chemical definition of this kind may lead to very grave malpractices. I may say this, that the brandy case has undoubtedly led to a good deal of adulteration of a type which previously did not exist, or which practically was non-existent. A standard was set up in the brandy case that a brandy to be a brandy must have at least 80 parts per 100,000 of alcohol, of ethers. That standard, in my opinion, was rather too high, but that is

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neither here or there. The result was this, that after a time in the case of the cheap brandies, undoubtedly artificial ethers were put in and artificial higher alcohols. I may say I know that from my own personal experience in this way: first of all in the case of a rather large shipper who was sending me a considerable number of samples to analyse he suddenly ceased sending them. I saw him one day and I asked him about this, and he said, "Oh, we do not need you now; we put them in at the other end", and he made no bones about it. He said "If people want 80 parts of ethers they shall have them." Another reason for what I say is this, that I have had samples on several occasions showing very high figures for ethers and higher alcohols, and yet which were obviously not good brandy, in fact, they showed such figures as would only be found in a very high class of nne old Grande Champagne, or something of that sort. I reported on these, and I said the standard was all right, but in my opinion it was not brandy. Then there was a lot of trouble and they said: "You chemists say that anything showing this figure must be right", and I said "Pardon me, I say nothing of the kind." That shows the gravity of a standard of this kind because it is so very, very simple to adulterate. If I may take the simile again of milk and water. The only thing they can introduce there is the addition of water which, of course, can be detected within limits, but it would be very difficult in order to avoid that detection to put some foreign fat into the milk. That would be a very difficult thing for retailers, and it would have to be done on a large scale. I think it would be very easy to find out, and therefore there is really no parallel there, whereas here all the retailer need do, or the blender, is to have a little bottle in his sleeve and pour the whole contents in it. It can be done without anyone knowing anything about it and the chemist certainly cannot detect it.

4265. (*Dr. G. S. Buchanan.*) The parallel is putting separated milk into milk. That is perfectly easily done and is done every day?—Yes, but they do not add fat to try and make it go right.

4266. No, this is another form of adulteration?—Exactly. In that case it is a difficult thing; they cannot bring it up to the limit. If you add separated milk to milk you get a low fat content, whereas in this case you can put in your ethers and bring it up to what you want. That is the difference.

4267. (*Dr. G. S. Buchanan.*) It is, as a matter of fact, reducing it down to a standard.

4268. (*Dr. Adeney.*) I take it from you that a chemical standard would only enable an analyst to detect extreme cases of adulteration?—Yes, that is my opinion. Again in the case of standards there are always objections because there are extremes which do not accord with the standard, and I think to those objections one says very rightly "We are not making a standard for an extreme." If an extreme case does come up then a man is always in a position to prove that he is being unjustly treated, but here it is only the extremes that you can spot. If a man labels a patent still whiskey "Pure Malt" no doubt you can say pretty well that is not a pure malt pot still whiskey, and so in the same way if the pot still man labels a pot still whiskey "Patent still whiskey" you can also tell in that case, but when you are dealing with blends it is only rare cases that you can tell. It is only in the extreme cases that you can tell.

4269. (*Chairman.*) What do you call an extreme case in blend—90 per cent. to 10 per cent?—Something of that kind. If you start with a pot still whiskey, of, say, 700 or 800 parts of impurities according to Dr. Teed, it is obvious that there you can add 60 or 70 per cent., or a good deal more than that, because the patent still also contains some impurities, and you can probably add 70 or 80 per cent. in some cases without it being detectable according to analysis. I do not say that the palate of the taster would not give some indication—it probably would.

4270. (*Mr. Guillemard.*) It would still be above 380?—Yes, if you take a patent still spirit containing 150 or 200 of impurities and the pot still containing 700 or 800, it is merely a question of arithmetic

4271. (*Dr. Adeney.*) I think you have answered most of the references that you have made in the rest of this section. Could any definition be enforced or be practicable, do you think?—I do not think so for the reason that I have given.

4272. Would you like to say anything more on what flavour is due to?—I have forgotten to mention in the case of the 380 standard why that is too high. That is a very important point, and I ought to deal with that. I have here in Appendix 11 an examination of 10 authenticated samples from nine different distilleries, all Scotch pot still whiskies, by Dr. Teed's method. (*See Appendix E, XI.*) I may say here, again, that method was the particular variation of the colorimetric method which Dr. Teed employs. These, with one or two exceptions which I have in my other tables, and which I had not got when I drew up this table, constitute all of the authenticated samples which I examined according to Dr. Teed's method. I have examined many blends, but these are all the authenticated samples I have examined. You will see that five of them are below 380, and five are above 380. The lowest one goes down to 246, and the highest one goes up to 563. I think it is a fair inference that when you take 10 whiskies from nine different distilleries and you get half and half, five below and five above, that if you take 100 distilleries you would probably get still greater variations. I think that Dr. Teed has been led astray by the fact that he has only examined samples from, I think, five Scotch distilleries. It is true he examined a considerable number of samples from each distillery, but that is really of very little value in this regard. Of course, it is valuable with regard to the variations at a particular distillery. Then with regard to flavour, I think I have dealt with that. The flavour is due undoubtedly to the impurities, the bye-products, but unfortunately we are only cognisant of part of them, and therefore we are not in a position chemically to speak as to flavours.

4273. I notice there are some of the appendices that you have not referred to. Is there anything else you would like to refer to under this section we are dealing with?—I think I have referred to all the appendices that come under this section. There is only one remaining appendix referring to nitrogen, and that comes in the next section.

4274. (*Dr. Horace T. Brown.*) With regard to the general characters of the whiskies as made in the pot and patent still, you have led us to understand that there is a regular transition from one end of the scale to the other?—Yes.

4275. Of course, in a series of that sort, the most interesting part resides in the cases which just lie on the limits of the two. Can you get a patent still whiskey which is indistinguishable by palate from a certain Lowland pot still whiskey?—I cannot say that I have ever seen one, but I rather think it could be done.

4276. But as a rule you could tell a pot still whiskey from a patent still whiskey at once?—If you have the two side by side.

4277. Although there may be an over-lapping as regards the analytical figures it is not necessarily an over-lapping as regards the characteristics of flavours?—No, not necessarily.

4278. That is rather an important point?—It is rather a difficult point. I think that some of the Lowland malts are very, very light in flavour, and I think you would probably get some of the grains that would show practically as much flavour.

4279. Of course, your analytical figures show a very considerable amount of over-lapping?—Quite so.

4280. If we consider those figures in Part 2 of your Society of Chemical Industry paper on page 16 of the reprint, and if we take the higher alcohols as determined by your Allen-Marquardt method, the grains start at 33 and finish at 80, and then you start with Lowland malts at 82 running up to 228. So that there is practically a joining up there?—Yes.

4281. But if, on the other hand, we take the higher alcohols as determined by the colorimetric method in the previous column the over-lapping is still more marked, and you start with your grains at 39 running up to 400, and you start with your Lowland malts at 189, so that there is a considerable overlapping there?—Very great.

4282. That is so, is it, no matter what method of analysis you adopt?—Undoubtedly.

4283. You think that Dr. Teed, if he had extended his observations further, would have found the same overlapping?—I think so.

4284. His highest figure, I think, for the grain whiskey was 204?—Yes, I believe so.

4285. Have we any means of converting these various results, as obtained by one method, into the results obtained by another method? I should like to take, first of all, your own case, where you have determined the higher alcohols by two distinct methods, one the colorimetric method, in which you use, I think, amyl alcohol as the standard, and the other the Allen-Marquardt method. Is it possible to use any factor to convert one set of observations into another?—To convert the colorimetric into the Allen-Marquardt?

4286. Yes?—No, I think it is absolutely impossible

4287. There is nothing approaching a fixed relation between them?—No, because the colorimetric showed other things with higher alcohols; that is the trouble. The test is not a specific test for higher alcohols. There are other matters there undoubtedly which give colouration.

4288. But supposing you have determined your higher alcohols by Dr. Teed's method on the one hand, and yours on the other, is there any constant relation between those figures?—Between the Allen-Marquardt?

4289. No, not the Allen-Marquardt, but between your colorimetric method with the amyl standard and Dr. Teed's method with isobutyl standard?—I say here: "In order to make the results obtained by the colorimetric process comparable as far as possible with those recorded in literature as obtained (chiefly in the case of brandy) with an isobutyl alcohol standard, we made some experiments to ascertain the relative intensity of colour obtained with this alcohol and with amyl alcohol respectively. The shades produced are not absolutely comparable, but if the figures given by us be divided by 2·5 the results will roughly approximate to those that would be obtained if an isobutyl control solution were used." We made a few experiments in that regard—I forget the number—but it is very likely if we had extended that we should have shown greater variations.

4290. That gives a reduction factor of 2·5?—Yes.

4291. And Girard and Cuniasse give a reduction factor of 1·66?—Yes, but I do not know whether that refers to the water bath method or to the flame method.

4292. Take this appendix, in which you have given the analyses of some seven or eight whiskies by Dr. Teed's method. I suppose you adopted exactly the method which he has described to us?—Absolutely.

4293. To the minutest detail?—Yes, I adopted it exactly as described by him. He described it in the Islington case.

4294. Did you happen to determine the higher alcohols by your own methods simultaneously with this?—In these cases do you mean?

4295. Yes?—Yes, I think so.

4296. You have not given those figures, and I think it would be very interesting to have them?—I do not know whether I can get them out now. It would take some time.

4297. With your amyl control?—No, I have quite given that up. It was by the Allen-Marquardt. I have not done any by the amyl control now for a long time.

4298. It is really impossible to convert one set of figures into another?—Practically. May I just point this out, that in that paper we refer to the colorimetric process, and we practically say there (in the last paragraph on page 6 and the top of page 7) that the figures are of no use, and we only give them as a matter of interest. I say that because suggestions have been made that we give two processes there, and that we set equal value on both, and that we consider them both in the same light. I think, on reading that, you will see that that is by no means the case.

4298*a*. (*Dr. G. S. Buchanan.*) You were telling us about the difference in the type of flavours in different whiskies from patent stills. Are those even more marked in the case of the older products than in the case of the new?—Keeping to Scotch grain whiskies for the moment?

4299. Yes, you were telling us that you could distinguish differences of flavour, and you had educated your palate to tell you that?—Yes.

4300. Do you get these differences much more clearly in the case of the aged product?—I should not like to say that. You get them pretty clearly in the new product I know, because I have compared them over and over again. I do not know that I have ever compared the old products, but I think it is pretty clear there. For instance, old Caledonian is very different from old Cameron Bridge or old Cambus.

4301. What is it that distinguishes the main difference between the Lowland malt and these other pot still whiskies that you have told us of as regards preparation?—At the present day I think it is largely a question of water and the malt employed, and in some cases different methods of preparation, running at a different strength, for instance, but that is not so much the case now as formerly. In the old days I think there was a very distinct difference. The Lowland malt distillers used to run their whiskies at a higher strength than the Highland malt, but I do not think that that obtains to the same extent nowadays, and, as a matter of fact, the line of demarcation nowadays is perhaps not quite so distinct as it used to be.

4302. Are the Lowland malt distilleries mainly distilleries where there is also a patent still?—Oh dear, no. On the contrary, speaking from memory, I think there are only one or two Lowland malt distilleries where there is also a patent still. I think you will see that from that chart which I handed in yesterday. I rather think they give it there.

4303. They are not whiskies that are made specially for blending purposes?—Oh, no.

4304. There are self whiskies among them?—Yes, certainly.

4305. A large proportion—I mean whiskies that go out to the public?—I do not think at the present day any pot still manufacturer has in view very much the making of self whiskies.

4306. (*Dr. Adeney.*) Do you include Irish pot stills?—No, I mean the Scotch people. But on the other hand I may say this, that it is said the pot still distillers work for the blenders only and get as big a whiskey as they can. That is absolutely untrue. On the contrary, I have come across several cases recently where people have been working away to get their whiskey lighter and lighter because it was much too big and much too fat, and people would not have it. I have two samples from two Highland distilleries, one a Speyside and the other a West Country whiskey, and they are absolutely different from what they used to be. They are ever so much lighter and I scarcely recognised them.

4307. (*Dr. G. S. Buchanan.*) You spoke of a chemical standard which you regard as impossible as applied to whiskey generically. I gather from you that it would be possible for analysis to detect the extreme instances that would have no hesitation in an ordinary case in identifying the fact that a particular whiskey was a malt whiskey, or establishing a pretty probable presumption?—Yes, in extreme cases, certainly.

4308. I have given you an extreme case. That would be an extreme case?—Yes.

4309. Ordinary grain spirit or a grain spirit with a small proportion of pot still spirit, 10 per cent., or something of that kind, would also be an extreme case?—In an ordinary way. It is really a question of arithmetic. If you have a malt of 800, say, and you use 10 per cent. of that it gives you 80, and you have a grain, say, of 150, that would give you about 230 or 223 of impurities. Now I have had malt whiskies which are nearly as low as that.

4310. You would get pretty near it in the ordinary case?—Yes, in a case like that.

4311. If you go out of your way you can always get some special spirit that is very close to the border line on the other side, I suppose?—Yes, but I am speaking of the extremes.

4312. You were speaking as if the detection of extreme cases or the identification as to whether a description of whiskey was right or not in extreme cases was a wrong principle. But is that altogether so? The alternative is to do nothing at all. That is practically what you would advise us to do in the matter, is it not?—No, I do not think so. What I should advise is this, that when a man sells, as a pure malt whiskey, whiskey which is not pure malt, or sells as Highland whiskey whiskey which is not

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Highland, and that can be detected by taste or otherwise, I think that there a prosecution might very well take place under the Merchandise Marks Act. I personally should not have the slightest objection to that.

4313. (*Chairman.*) But suppose there is no merchandise mark, as for instance, upon a glass of whiskey given over the counter. The Merchandise Marks Act merely applies to a mark on the merchandise?—Yes, on the bottle.

4314. (*Dr. G. S. Buchanan.*) It is the same with regard to grain whiskey. If a man described a grain whiskey incorrectly, and you could detect it by analysis or otherwise, you would consider it reasonable that he should in some way or other be penalised?—If he described grain whiskey as malt whiskey?

4315. Yes?—Oh, certainly—undoubtedly.

4316. One question with regard to the estimation of these different whiskies by analysis. I gather that in the brandy case you had a special objection to the limitation of ethers because it was so very easily imitated, or adulteration was so easy in consequence?—Yes.

4317. Does the same thing apply, or apply with quite the same force, when you are dealing with a coefficient which is a combination, as it were, of massed impurities?—I am afraid so. I am afraid you would get people putting together the right mixture very quickly. I should like to avoid very much, if I possibly could, anything of that sort going on.

4318. With regard to the question of overlapping in these different classes of whiskey which are given in your tables under Part 2, the overlapping that was spoken of just now was due to overlapping of the higher alcohols particularly I think?—Yes.

4319. The higher alcohols by the Allen-Marquardt method?—Yes, that is so, and by the colorimetric. There is more overlapping by the colorimetric.

4320. Just to see how that worked out I added up the figures in your different columns, the total acids and ethers and higher alcohols by the Allen-Marquardt, and the aldehydes and the furfurals. Looking at them in that way the Highland malts, for an average of 36 samples, gave a figure of coefficients of 288; and the Lowland malts, an average of 16 samples, gave 255; the Campbeltowns, an average of 15 samples, 352; the Islays, an average of five samples, 294; and the grains, an average of 23 samples, 123. Then the range was from 430 to 222 in the case of the Highland malts; 349 to 149 in the case of the Lowland malts; 509 to 209 in the case of the Campbeltowns; 337 to 259 in the case of the Islays; and 174 to 63 in the case of the grains?—I have 191 as the maximum of the grains.

4321-4. 190·7?—Yes.

4325. Then you are right. I had got the figure here, and it was my statement that was wrong. Taken as a whole, when you take these impurities together, they do show a large range in each case, but they also show considerable contrasts, do they not, of the grains with the other malt whiskey?—They show a contrast undoubtedly.

4326. Could you say whether that contrast as a whole is more marked with the new than with the old?—I should say, on the whole, the contrast is less with the old than with the new—rather less, because you get the cask products which would be pretty well equal in every case, and which would tend to level up.

4327. Did I gather from you that you could in ordinary circumstances get a much closer approximation or a much closer idea as to whether any alteration or addition of patent still spirit to pot still spirit had taken place if you were always analysing or frequently testing samples from the same distillery?—I do not think I quite follow. Do you mean that if I had a large series of analyses of a particular distillery, and then someone added some grain whiskey to this particular pot whiskey, whether I should be more likely to detect it in that case?

4328. Yes?—I think you would be more likely to, undoubtedly, because you would have practically a specific knowledge of a particular whiskey there. I may say this, that analysis is very useful when you have a specific whiskey to show whether the retailer has adulterated, that is, substituted another whiskey. There it is very useful indeed. You cannot tell in all cases, but you can tell pretty often.

4329. That was what I wished to bring out. You said there was often a considerable range and difference in analytical characters between the same kind of whiskey that is turned out from the same distillery?—Yes.

4330. When you are speaking of that you mean a whiskey turned out from the same distillery of the same trade description and designation, and the same age and condition apparently?—Yes. I mean this, that if you take a particular distillery you get pretty wide variations in the chemical figures, although the general characteristics of flavour, and so on, and bodies may remain not very much affected because the amounts of these chemical things are so small, and some of them, no doubt, have very little influence on flavour, others more so.

4331. All the same, if you had a sufficient number of samples you would get an idea of the range of alteration that was likely to be characteristic of that particular distillery?—Yes, certainly.

4332. And some change like the addition of a patent still whiskey, even if it was in comparatively small proportions, might be detectable, might it not?—You would get it probably within a narrow range, but I do not know that that would be very valuable, because it scarcely is a commercial proposition. Very few self whiskies are consumed or go to the consumer direct. In very few cases does a particular whiskey from a particular distillery go to a consumer. It goes to the blender, and you would have perhaps twenty different Highland malts, four or five different Lowland malts, three or four Islays, and two grain whiskies in a blend, and there you get so helplessly complicated that any knowledge of that kind, although interesting, is scarcely applicable. What I meant was this, that if you have a particular blend which is on the market, say a particular brand, I find this, that the chemical figures of those particular blends keep fairly level. They vary, of course, to a certain extent, but it is very remarkable that the blender, with his art, manages to keep the flavour regular, and also at the same time the chemical figures. In a case like that, if a publican is substituting a cheap whiskey, for instance, for a high-class blend, probably, I should say, in five or six cases out of ten you can say that that is not this particular whiskey. That is my experience.

4333. On analytical data?—On analytical data. Personally, I am not so sure that I care to go merely on analytical data. I put two and two together. I taste the whiskey, and if I find there is something wrong, and find the analytical figures are all out, then I am pretty sure of it.

4334. As you have mentioned brandy, there is a very large range, is there not, in the composition of different classes of brandies?—Yes, I think the figures vary very much.

4335. If you were to have a series of brandies analysed and set out in the same sort of way as you have done for us here with the Highland malts, the Lowland malts, the Campbeltowns, and so forth, you would get also large ranges and variations?—Yes.

4336. Supposing you were comparing such a series with the series of grain whiskies that you have given us here, would you not be able to set out cases of overlapping, and cases in which the grain whiskey analysed seem to tend to particular brandy analyses, and so forth?—I think if you took that extremely objectionable factor, the total coefficient, you might, because there you are lumping together all kinds of things of which you do not know the details, but I do not think if one analysed a grain whiskey or a series of grain whiskies and then a series of spirit made from the grape in a rectifying still (I think I handed in yesterday in my paper on "Brandy" something of the kind), if you analysed them carefully and compared them you will see very considerable differences even as far as our limited knowledge of the interpretation of chemical figures can lead us.

4337. So that you would regard the ratio of particular items in particular bye-products and the relative proportions as very important?—I should judge more by that than by lumping the whole thing together, certainly.

4338. And if our knowledge enabled us to go further and split up some of these massed figures, for in-

stance, with regard to the ethers, aldehydes, and higher alcohols, it would carry us further still?—I think so, decidedly.

4339. You did give evidence, did you not, for the defence in some brandy prosecutions where the offence alleged was the addition of grain spirit?—Yes. That prosecution was purely on this ether limit, and I objected to that, and said we have not sufficient knowledge to say that is correct.

4340. You did not defend the addition of grain spirit or grain whiskey, as, perhaps, one should call it, to brandy and the sale under the name of "brandy"?—No, certainly not. You will see that pretty clearly from my definition of brandy.

4341. (*Mr. J. Y. Buchanan.*) You have been asked about the flavour of whiskey, and you have mentioned several times the effect of the water upon the flavour. In the Highlands we often hear people near distilleries saying that the water there comes over 20, or 40, or 80 falls, implying that this is an advantage. Do you think the water has an effect on the mixture that is distilled, or is the effect of the water produced in the dilution of the whiskey to the strength that it is sold at?—I think, probably, both things come in, but chiefly, I think, the effect of the water is in the fermentation and in the mashing stage. If you have a very soft water you get very different extractives in your malt than if you have a very hard water. We know that very well in the case of beer, and how it undoubtedly will affect the fermentation, the yeast.

4342. In the North of Scotland and the Highlands nearly all the water comes off primitive rocks and is practically pure water?—Very, very pure.

4343. Do you think that for the fermentation of wort for whiskey that is preferable?—It certainly seems to me, so far as one can judge.

4344. You think there is a scientific basis for the belief, the almost universal belief in Scotland, that the water has a very considerable effect on the goodness of the whiskies?—I think so. I think undoubtedly that the water has very considerable effect.

4345. You have referred to Dr. Bell's evidence before the Select Committee on Foreign Spirits. I will not ask about the chemical details, but is it your experience that foreign spirits are imported into this country for the adulteration of whiskey at all?—I think that perhaps some seven or eight or nine years ago it was done, but I think there is very little of that kind of thing now.

4346. Is what you called in these reports foreign spirits entirely distilled from the potato or the beet?—Mostly potato. If it came from Germany it would be almost certainly potato.

4347. I think Russia is the greatest spirit-producing country in the world?—Yes, I think that is so.

4348. And the people's spirit or drink there is vodka?—Yes.

4349. And that answers to whiskey in Scotland and Ireland as being the drink of the people?—Yes.

4350. Is vodka spirit distilled from any particular material like grain?—They distil it largely, I think, from rye and maize.

4351. But not from potatoes?—Formerly it was distilled almost entirely from rye, but nowadays maize and potatoes are, I believe, largely employed.

4352. The distillation is in private hands, and is not a Government monopoly?—I think it is in private hands.

4353. Do you know if there is any restriction in Russia as to the materials used?—No, I do not think so.

4354. I suppose there is no vodka imported into this country for adulteration purposes?—Oh, no.

4355. (*Dr. Cushny.*) I should like to ask one or two questions about flavours. You say you can differentiate between malt pot still and malt patent still by flavours?—In a general way—I think so.

4356. Is that by the amount of flavour, or by any special quality of flavour?—No, I think it is the amount of flavour.

4357. In an average pot still, for instance, Glen Dronach, how much patent still whiskey could be added before you would recognise the adulteration?—By flavour, you mean by taste.

4358. By flavour purely?—I am afraid that is a very difficult question.

4359. Would it be 50 per cent. or 90 per cent. of patent still?—I should think probably in a case like that you could certainly tell by taste 30 or 40 per cent., but it varies so much because the pot stills vary so much. If you are brought a specific whiskey of which you know the history and know the whiskey, and then you are asked to say, "Is this whiskey or is it a blend," that is comparatively simple. But if you are brought whiskey of which you do not know the origin, and you are then asked to say whether there is any patent still whiskey in it, or how much, then it is a very difficult problem.

4360. You said 30 per cent. of pot still and 70 per cent. of patent still?—I should think if you had a Highland malt whiskey which was not a big one, you would probably distinguish 30 per cent of patent still.

4361. You would?—I might. I do not know what an expert blender might do. He might probably put it a bit finer than that.

4362. The reason why I asked you was, that of course you were much more capable of differentiating those than an average member of the public?—I should think so, undoubtedly.

4363. The average man would probably not be able to differentiate between those two nearly so accurately?—I do not think the average man knows anything about it at all. May I give an instance. The other day, at a club of mine, I asked for some whiskey, pure and simple, because it had been suggested that people never asked for "whiskey." The attendant poured me out some whiskey, and I said, "I asked you for whiskey, what are you giving me?" and he said, "Scotch whiskey." Then I said, "Yes, but what is it?" He mentioned the name of a particular brand, and I said, "That is not what I want to know; I want to know whether it is pot still or patent still, or a blend." He looked at me as if I was demented—I was not surprised at that. I said, "I suppose you do not know anything about pot still or patent still?" and he said, "No, sir." And I said, "You do not care?" and he said, "No," and I said, "Neither do I as long as the whiskey tastes all right."

4364. That raises another point. Have you ever heard anything of a demand for whiskey in Scotland under the name of "Scotch whiskey"?—Never. They would either ask for whiskey or a glass of spirits.

4365. Another point with regard to flavour I want to have explained. I understood you to say an amount of malt was added in order to give flavour?—Yes, undoubtedly.

4366. We have been told by several former witnesses that in Ireland they add raw grain in order to give flavour?—Yes, it is quite right. I think that undoubtedly you get a different flavour from a raw grain mash than you do from a pure malt mash. There is no doubt about that.

4367. Then it is not a question of the amount of flavour, but it is the character in those two?—The character in those different cases, certainly.

4368. (*Mr. Guillemard.*) With regard to that part of your evidence when you were talking about what would result by the fixing of a chemical standard, was this the general line that you were taking, that if a chemical standard were fixed, and if that standard was made the legal test by which you would say whether a thing was whiskey or was not whiskey, there would be a real danger that whiskey in the future might be produced, not in the pot still or in the patent still, but would be produced in laboratories by chemists for consumption by the public and sold by them? Do you think that is a possible development?—I think so, undoubtedly. I think that what would happen would be that the chemist would not produce the whiskey, but he would convert the whiskey with a low coefficient of impurities into whiskey with a high coefficient.

4369. I meant something more than that. Could he not commercially and successfully manufacture the whole thing? Could he not produce alcohol?—I do not think he could produce alcohol as cheaply as a great distillery could.

4370. (*Dr. Cushny.*) He could get it from potato spirit?—Yes, but the price at which he could get his spirit would have to be a great deal higher than the distiller could produce it himself. I could not pro-

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duce alcohol in my laboratory, and if I tried I should get into trouble with the Revenue to start with, at anything like the price that a distiller could.

4371. (*Mr. Guillemard.*) What I had in my mind, perhaps, was this: that a chemist would set himself to run a distillery, and that he would do it in that way?—That he could get his impurities and could actually get them by putting back the foreshotts and feints?

4372. Would it pay him?—I think it could be done undoubtedly. If people who objected to the taking out of the impurities in the patent still wanted them, we can put part of them back. I think the distiller might fairly say that.

4373. I mean the distiller with chemical knowledge?—Yes.

4374. A distiller with a patent still, for instance?—Yes, I think undoubtedly it could be done. If the objection is that you take too much out, and you say to the distiller you are taking too much out, it would be very easy to put part of it back?

4375. (*Chairman.*) I want to know a little more about this assistant who mistook you for a demented person when you asked, "Is this pot still or patent still"? It was not the proprietor?—No; this was at a club house where there is a kind of bar.

4376. Would you mind stating the sex of the assistant?—A man.

4377. That man, then, in his position would not have known whether the licensed victualler had paid 1s. 9d. for patent still, or 5s. 6d. for pot still spirit. But surely if the proprietor had sold you that, and you had asked him the difference he would not have regarded you as so demented. He would have thought you very shrewd, would he not?—I do not think he would have known. This was at a club.

4378. Do you mean to say price does not bring it home to his very heart?—I do not think so, my lord. The difference is not really so great as that. In the ordinary way he would not be buying either a pure malt whiskey or a pure grain whiskey. He would be buying a blend.

4379. Is your idea that no pure pot whiskey unblended is provided for retail sale?—I think that you can get it if you ask for a particular article. If you ask for a particular brand or the name of a particular firm which provides and sells pure malt whiskey, I think many of the licensed victuallers' houses keep that.

4380. Would that equally apply to pure patent still spirit?—I think that in recent times one probably could get pure patent still spirit.

4381. Now?—Yes, in some places. In Scotland you could have got it very long ago.

4382. Your knowledge is very great on this subject, and I ask you has it come to your knowledge that licensed victuallers as a practice keep the two kinds, pure pot still and pure patent still?—Not in a general way. I think in a general way all the whiskies they have are blended.

4383. If they do, is it to meet the tastes of their customers or is it a question of price?—I think it is undoubtedly to meet the tastes of their customers in a general way.

4384. You have made it clear, and I think rightly, that as a rule the ordinary customers know nothing of the differences between pot and patent still?—No.

4385. What is the use of keeping it for a set of people who do not know the difference?—They know they like a whiskey of a particular flavour.

4386. That I understand. It may be stronger or of greater bouquet, but if they do not know the terms it is no use saying to them, "Will you have pot or will you have patent"?—Not the least.

4387. You spoke of a time when you first entered school and commenced your studies on the subject of these two whiskies. I want you to go back to the time which I think represents the condition of most people—that is, your knowledge before you had trained on. What was your idea of the difference between pot and patent still when you were in that state of inexperience?—In those days, when I was in that state of inexperience, and I had a pure pot still whiskey and a grain whiskey side by side, and knew what they were, of course, I could tell the difference by the flavour, the pot still having a much higher flavour. Then, going a little further, having a blend of pot still and patent still, and comparing that with a pure pot still whiskey, one's first impression is that pot still whiskey is the finer article. In fact, I have gone through these stages myself, and I took to drinking pot still whiskey, but I found I very soon got tired of it. It clogs the palate; it is like eating very rich food. A piece of grouse may be a very much finer article than a piece of beef, but you very soon get tired of the grouse. I found that I went back to a blend.

4388. But I thought that was the time when you were comparing pure pot and pure patent?—I have drunk pure patent still spirit, and I have tried it for considerable periods.

4389. When you were trying pure pot still and pure patent still the difference, surely, of those two is marked and very clear?—Oh, yes; quite so.

4390. How would you yourself describe the difference as to strength, or flavour, or body, or what else?—There is a much fuller flavour, and the whiskey also has more body. It seems fatter as you swallow it.

4391. First, for medical purposes, would the pot still whiskey be a greater stimulant?—I should rather not give an opinion on that.

4392. You have studied this question so much that I thought I would ask that question. Now I want something from you as to the marks. If you saw written up "Scotch whiskey" or "Irish whiskey," and if you asked for Scotch or Irish whiskey, what do you think that represents, or what is it taken to represent rather by the general public?—I think Scotch whiskey represents to them something made in Scotland, and which has a particular flavour.

4393. To your mind would it include patent still"?—Undoubtedly.

4394. That is the difference between you and others as to whether Scotch and Irish whiskey does or ought to include patent still whiskey?—Quite so.

4395. You say it does?—I think it does undoubtedly.

4396. You have given us some remarks in your papers on grain spirit. What does that convey to the public in your opinion?—A kind of whiskey.

4397. But the word "grain" is largely used, is it not?—I do not think it is largely used by the public. It is in Scotland, perhaps. It is known in Scotland as grain whiskey.

4398. (*Dr. G. S. Buchanan.*) It is universally used in the trade, is it not?—Yes. It is in this way in the trade. A man who is ordering whiskey does not write and ask for grain whiskey or pot still whiskey, but he writes and asks for whiskey of a particular distillery.

4399. (*Chairman.*) But Dr. Buchanan is right—it is used in the trade. If you were to meet with grain spirit or grain whiskey what would that represent to you?—The term "grain whiskey" to me would mean patent still whiskey undoubtedly, but then I happen to know something about it.

4400. Supposing we were trying to communicate to the public what it was they were taking, what should you recommend, with your great experience, as being the differential description that should be made between the two whiskies?—I personally do not think it would be right to make a difference at the present day, because the public has been used to buying these articles as Scotch whiskey pure and simple, and if you differentiate, and that differentiation involves new labels, and a new kind of label, people will not comprehend that, but they will say: "Oh, this whiskey cannot be the same as it used to be, it must be a different thing," and they will go elsewhere for their whiskey.

4401. I presume your answer will include a blended whiskey, that you would have no expression of the differentiation by means of blend?—I think that any differentiation which would make a marked difference in a brand which has been built up on that label and on that brand would be extremely unfair, because people buy Mr. So-and-so's whiskey as "Scotch whiskey," and as "Mr. So-and-so's whiskey." If suddenly it is ordained that you have to put on that label, "This is composed of so-and-so" the man in the street does not understand what that means, but what he does appreciate is that there is some difference appar-

ently, and that Mr. So-and-so's whiskey is not the same as it used to be.

4402. Then you recommend everything to remain exactly as it is, without anything being done to inform the public?—I do not see any reason for altering things. I do not see the slightest reason.

4403. Your policy is rather conservative, Dr. Schidrowitz?—No, I think it is very liberal.

4404. I do not want to detract from your liberality, but you do wish the public to know whether they are getting Scotch or Irish whiskies, I suppose?—I think when a man asks for Scotch whiskey he ought to have it.

4405. And if he buys a bottle it would be well that he should know by the bottle whether it is Scotch or Irish. You have no objection to that, I suppose?—None whatever.

4406. Would you allow any information to be given as to whether the whiskey was malt whiskey, or distinguished from other whiskies made from other ingredients than malt?—I think that if a merchant who is selling a pure pot still malt whiskey desires to inform the public of that he is at liberty to do so.

4407. It is not a question for the merchant, it is a question for the public. We are looking after the public interest. Are the public entitled to know? I do not care a bit about what the merchant thinks. The question is what the public ought to know?—My view is this, that the public regard all these whiskies as Scotch whiskies.

4408. Ought the public to know the difference between getting malt whiskey and another whiskey? What is your definition of a whiskey which is sold as Scotch whiskey? What ought it to be?—A spirit distilled in Scotland from cereal grains.

4409. Any cereal grains?—Well—practically yes. In practice, of course, it amounts to this, that it is the grains which are used at present.

4410. Do you not think the public have a good deal of confidence in malt for the purpose of whiskey?—I do not know, my Lord, because if you take the Irish whiskey they use a very small proportion of malt.

4411. But the consumption of Scotch whiskey is very much greater than the consumption of Irish whiskey. Do you not think people are under the impression it is malt?—I do not think so. They do not know anything about the matter.

4412. Do you think they know much about rye or rice?—I do not think they mind as long as it suits their palate, and they like it.

4413. (*Dr. Adeney.*) The great experience you have of Scotch practice does not extend to Ireland?—No. I have some experience of Ireland, and I know some distilleries there, and I have samples sometimes from Irish distilleries, and I have examined a number of Irish whiskies, but I would not care to pose as a great expert on Irish whiskey.

4414. Just a question upon the taste of the man in the street. What would you think he would expect when he asked for a glass of whiskey?—I think he would expect to get what he has been used to consider Irish whiskey. I do not think you can go much farther than that.

4415. I want to ask you one or two questions with reference to the papers you have handed in, reprinted from "The Analyst." I do not want to go into any details. I think your first paper on "The determination of higher alcohols in spirits" was reprinted in "The Analyst" of June, 1905?—Yes. May I point out that both those papers are by myself and Mr. Kaye. It is only fair to say that.

4416. In your first paper you dealt, I think, with the Allen-Marquardt process?—Partly, but I dealt more fully with the Allen-Marquardt process in the second paper. I deal in the first paper with the new process of Beckmann, that is the nitrite process.

4417. You give a number of details for accurate work with the Allen-Marquardt process, and you do make some reference to it in your first paper?—Yes.

4418. Can you refer me to the page?—It is on page 2. There we point out if you use an ordinary reflux condenser you get loss. You want a special form of condenser, or you can work with a sealed bottle. We find it is easier to work with a special form of condenser than the sealed bottle, and the losses which are obtained are recorded in the second paper.

4419. Can you give the reference to the second paper?—It is on page 1. We have the losses here working with amylic alcohol in carbon-tetrachloride solution. The average working according to the strict conditions of the process which are very necessary are on the whole very small, amounting to generally about five or six per cent. If you vary the processes you undoubtedly get variations of loss, and so on; but if you stick to the conditions of the process pretty closely, then you get very good results. If you look at table 2 on page 2 of the second paper, there we worked actually with 50 per cent. solutions of ethylic alcohol and extracted the higher alcohols. There, again, you have the percentage of gain and loss, amounting in most cases to very little. In some cases it is a little bit high, but I think we refer to those particular cases and show why they were high. But my experience generally with the process is that the more you work with it the more familiar you become with it, and the better the results.

4420. You have to serve an apprenticeship to it?—You do undoubtedly, and I may point out this: a great deal has been said about the Allen-Marquardt process, and Dr. Teed referred to some experiments he had made. But I can only say my experience does not confirm that, and I have dealt rather fully with the Allen-Marquardt process in a paper which I sent to the Journal of the American Chemical Society, and which is reprinted in volume 29, No. 4, April, 1907. I pointed out there that the Allen-Marquardt process is now officially used in the laboratories of the West Australian Government; it is now used exclusively in the laboratory of the Bureau of Chemistry at Washington; it is used, I think, by practically every worker at the present day who wishes to obtain serious results. I do not know what process is employed in our official laboratory here, but possibly you may get that from another source. The workers in the Inland Revenue laboratory of the United States in the paper I referred to yesterday also used the Allen-Marquardt process, so I think there is no doubt there is a consensus of opinion amongst serious workers that it is the only process which really is reliable.

4421. You have also dealt in this second paper with this colorimetric process. First, I should ask you, do you know as a matter of fact whether this colorimetric process is or is not the official process in France?—It is not official; on the contrary. It is used by the Paris Municipal Laboratory, but the official process in France (I had occasion to get to know this last summer when I was down in Bordeaux) is a modification of the Roese process, which is, if anything, more hopeless.

4422. (*Dr. Horace T. Brown.*) That is the chloroform method?—Yes. I asked them why they still used it, and they said they would much prefer the oxidation process; but Governments are conservative, and they had to go on at it.

4423. (*Dr. G. S. Buchanan.*) They have recently, have they not, set up some equivalent to a Court of Reference to work out official processes anew?—Do you mean in France?

4424. Yes?—Yes, I rather think they have.

4425. You do not know whether they have got to brandy yet?—I think that is only a question of territorial designation, is it not?

4426. It is analytical methods they are looking at?—I do not know about that.

4427. (*Dr. Horace T. Brown.*) Do you find the Roese method gives you at times negative results in whiskey?—Yes, it means you have the chloroform going into the alcohol instead of *vice versâ*. That is quite hopeless, and they have given that up too in the United States.

4428. (*Dr. Adeney.*) There is one point in reference to the Allen-Marquardt process that I should like to put to you. You had not at the time of reading that paper satisfied your mind as to the process succeeding in giving correct figures for the higher alcohols if propyl alcohol be present?—No.

4429. Have you no further information?—No, I have not done anything further in that direction.

4430. Would you as briefly as possible tell the Commission what defects you consider the colorimetric process in principle labours under?—The

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defects of principle are that the various higher alcohols produce very different colourations. The result is that unless you are working with the same proportionate mixture you are liable to get very serious errors. Then, again, in a paper read before the Society of Chemical Industry by Dr. Veley, he says that if you get the higher alcohols absolutely pure they give no discolouration whatever, therefore your standard solution depends rather on the amount of the impurity it contains, which makes the thing more hopeless than ever. Those are the chief defects in principle. Then there are defects in practice, which may be briefly summed up in this way. There is the defect that people work in all sorts of different ways. Some work at the naked flame, and some work in the water bath, and you get very different results curiously enough, although you ought to get the same results using your control in the same way.

4431. I can confirm that from my own experience in the same direction?—Then there is the de-aldehyding agent that the French people use, the metaphenylenediamine hydrochloride. The result is that you get either a fluorescent solution or a fluorescent distillate. When you have a fluorescent solution I almost invariably find you have furfural in your distillate, and I rather think that may account for some of Dr. Teed's high figures—he had not got rid of all the furfural.

4432. There is a re-agent by means of which it is possible to satisfactorily separate the aldehydes, including furfural, is there not?—Yes, I think the best re-agent is the one which we call Hewitt's salt. Those are a few of the defects. I think there are others.

4433. Is it possible, do you think, to get accurate results using isobutyl as the control for whiskey determinations owing to the difference of shade of colour?—No, I am afraid not.

4434. Is not it a matter that depends on individual judgment?—Very much, and it depends so much on the means of heating and the purity of your control, of course.

(Adjourned for a short time.)

4435. (*Dr. Adeney.*) The next section in your proof deals with the question of public health. I believe you do not claim to have any medical qualifications?—No.

4436. But you have had opportunities of observing the effect of pure patent still spirit on the system, have you not?—I have. I have taken it myself, and I have given it to people at my house, and they have not noticed the difference. They have said: "What a beautiful mild whiskey this is." That is all I have been able to gather, and I have myself drunk it for a considerable period.

4437. You have had no complaints from your guests the next day?—No, none whatever.

4438. (*Chairman.*) That is a pure patent still whiskey?—Yes, my lord. I think there is no question now as to its not being deleterious. I do not know whether it is worth while saying much about that, but the only point I should like to draw attention to is that if whiskey were to be regarded as a drug, if it were to be put into the Pharmacopœia, and if it were to be held that the bye-products, as far as we know them, are important medically, then one would have to pretty strictly define the particular type of whiskey that would have to be used, because, assuming that a certain proportion of these bye-products had a certain medical effect, it would obviously be wrong to give medically a whiskey having either half that amount or, on the other hand, having double that amount. Assuming that the standard type of malt were of the Speyside type, it would be equally important that the patient should not receive an Islay, and he should not receive a patent still whiskey. Speaking without any reference to the medical effects, of which I personally know nothing at all, I merely point out the wide difference in the constituents of the whiskies themselves if there was any question of whiskey being used as a drug, and if it were assumed that these bye-products had specific therapeutic or pharmacological effects.

4439. Can you give us any information as to the character of the cheap whiskies sold in low-class public-houses?—Some time ago I had some whiskies collected in the lowest districts of the East End along the river, and I have some of those samples here. I think it might be interesting for you to see them. I have some Scotch and some Irish samples, and I think that all one can say about them is that they are rather poor at the price. Considering the price, the flavour, and so on, it is by no means what it might be; but I do not think there is any question at all, even in these samples, of anything fiery or virulent, or anything of the kind of thing that we hear about.

4440. Nothing poisonous?—No, nothing as far as I can find out.

4440*a*. That is for the price of it?—For the price paid; I think they are expensive. I have here an Irish whiskey which works out at 18s. 4d. I have put the prices on in pencil worked out at a proof gallon. I have here an Irish whiskey at 18s. 4d., a Scotch whiskey at 16s. 9d., and an Irish at 7s. 6d. That is a fair price in this particular case. I have here a Scotch whiskey at 18s. 2d., and a Scotch whiskey at 20s.

4441. Does it work out at that price by multiplying a glass until it comes to a gallon?—That price is worked out to the proof gallon.

4442. But is that taking the price that you buy it at by the glass, or how do you buy it?—These were bought by the quart. A messenger went in and asked for a quart of whiskey. I will put these samples in. I might say that some years ago I had a sample shown me which was said to be used as whiskey that undoubtedly was of a fiery and virulent order, but I have very grave doubt now whether that stuff really was made for potable purposes. I have never personally been able by messenger to get anything of the kind.

4443. Where were those samples from?—From the East End of London, somewhere about the docks. We tried at as low a class of house as we could possibly get. Those were the instructions to the messenger.

4444. (*Dr. Adeney.*) You, perhaps, have not seen any samples of a whiskey that is complained of in Ireland very generally, whiskey sold at Irish fairs?—No, I am afraid I have never come across it.

4445. Have you made any experiments in reference to the presence of alkaloids or nitrogenous bodies in whiskey?—Yes, I have; you will find the result in Appendix 12. I hand in a number of analyses of the quantity of nitrogen (as ammonia) in the usual terms. I think those are the first figures ever published on the subject of nitrogen. (*See Appendix E, XII.*)

4446. What is the process?—Shall I read it?

4447. Please?—"The method of estimating the nitrogen was as follows: To 200 c.c. of the whiskey 0·2 grams of tartaric acid were added, and the whole evaporated to a small bulk." We adopted that method because Guareschi and Mosso had adopted that method of retaining the nitrogen by means of tartaric acid. "The residue was transferred to a flask, made alkaline with caustic alkali, and then steam distilled. The distillate was again rendered acid with tartaric acid, evaporated to a small bulk, transferred to a Kjeldahl apparatus, and treated in the usual manner with strong H_2SO_4 and K_2SO_4. The ultimate distillate was Nesslerized." The amount of ammonia would be too small for titration.

4448. The results you have got were obtained in that way?—Yes, they were obtained in that way. Then you will notice there are also some American analyses of two American rye whiskies, and they show appreciably higher nitrogen contents, which is rather interesting.

4449. Have you any explanation of that?—No, I think not, except probably it is due to the nature of the grain.

4450. Not to the cask?—It may be due to the charring of the cask. One would get a certain amount of tarry matter formed, and you might get more nitrogen in that way.

4451. Do you know as a matter of fact whether the casks in the case of those American rye whiskies were charred casks?—I think they are practically universal, almost absolutely universal. There are some interesting points which we noticed in making

our nitrogen estimations, namely, after the first steam distillation the distillate had a distinct odour reminding one somewhat of tobacco smoke, and this was particularly noticeable with the heavy malt whiskies, and when one acidified this liquid this particular odour disappeared, and of course that points to a basic substance. It is interesting to notice that in some of the heavier malt whiskies when you distil with alkali you get a greenish yellow coloration in the distillate, and that also disappears if you acidify. That rather indicates that further study of these basic substances might be of very distinct interest, particularly as people have made remarks in the past about alkaloids and so on in whiskey. I have tested a very considerable number of whiskies with alkaloid re-agents.

4452. But you have not been able to detect any?—No, I have not been able to detect any; I have never been able to detect anything. I will formally hand in Appendix 12. (*See Appendix E, XII.*)

4453. (*Mr. Guillemard.*) Could you give the Commission any idea of the extent of your inquiries when you were looking for the very bad whiskey? What period did it extend over?—These samples were collected about two years ago now, and the number of samples purchased, I think, were about seven or eight at different public houses in the East-end along the river side.

4454. You have not conducted a systematic inquiry?—No, I only mean this, that as far as we have gone we have failed to discover anything.

4455. A thing that is often alleged is the prevalence in certain low houses of whiskey that is very dangerous to health. Have you any knowledge, apart from this isolated experience, of the truth or otherwise of that?—I have never come across it. Years ago I was shown a sample of the stuff.

4456. It was quite distinct from pure whiskey?—Yes, it was quite distinct from pure whiskey, and it was then stated to me that it was used for and sold as whiskey in low districts. I have reason to think I was misinformed, and I think it was probably a spirit for methylation.

4457. I have seen statements, and in fact some communications have been addressed to the Commission, in which it is said that in certain parts, in public houses, and places like fairs and race meetings there is not only a very inferior but a very dangerous and poisonous spirit sold. The same thing was said before the 1890-91 Committee, though I do not think they had very much evidence about it; but I am asking you whether you have any knowledge, not necessarily your own experience, but whether you know whether such spirit has been found in any considerable quantities as apart from public rumour?—No, I think that Dr. Tatlock, the public analyst for Glasgow, made some investigations at fairs and places like that, and did his best to try and get samples of this particular type of whiskey; and I think he failed altogether.

4458. Do you remember when that was?—I think that is about 10 years ago, but I am not sure.

4459. It was in evidence in the 1890-91 Committee?—It is about 20 years ago.

4460. I almost think it was in evidence in the 1890-91 Committee. But you have no first-hand or second hand experience since then that carries you further than that?—No, none at all.

4461. You have given us your own opinion that it does not exist to any very great quantity?—I do not think it does myself.

4462. That is only your opinion, as distinct from experience.

4463. (*Dr. Adeney.*) That was in the whiskey case.

4464. (*Mr. Guillemard.*) Very well. Has the use of a charred cask ever been tried in the United Kingdom for any potable spirit?—I think a lightly charred cask has been tried.

4465. For what?—For whiskey.

4466. Do you know how it worked out?—I do not think it worked very well, I am not quite sure. I think possibly if you were to ask some of the blenders who come here they might be able to tell you. I rather think it has been tried, but I do not think it worked particularly well as far as I know.

4467. Have you any idea why it should be in universal use with grain spirit in America and yet should not be worth trying over here?—I think it is purely a question of flavour, and that you may get a distinct flavour from a charred cask which does not go well with Irish or Scotch whiskey.

4468. It tends to go well with the maize flavour?—No. I think it tends to give the flavour that comes from the charred wood that the American people like.

4469. (*Dr. Cushny.*) Do you think that the pot still whiskey will stand greater dilution than the patent still?—I think that only applies to a very limited extent. I think one of the chief reasons why one drinks an alcoholic beverage is on account of its alcohol. If you have too strong a flavour as apart from alcohol, and you try and dilute your flavour down to a certain point, you are very liable to render the alcoholic contents so low that you get an insipid beverage.

4470. But do you not think that a good many people appreciate the flavour of the whiskey that they drink as well as the alcohol?—Undoubtedly.

4471. There is so very little flavour in patent still relatively that if they diluted it to an equal extent with the pot still they would have no flavour at all practically?—I think it is only a question of degree. Personally, I have drunk pure patent still spirit for weeks on end, and diluted it in the ordinary way, and yet had quite sufficient flavour. I do not say it is the type of spirit I personally prefer, because I prefer a blend, but undoubtedly there was still sufficient flavour, as far as my palate went, to render it quite an agreeable beverage.

4472. Do you not think it would have considerable influence on the public health question if it was found that the patent still whiskey was taken in a more concentrated form than the pot still?—I do not think so. I do not think it works out in that way. I do not think so, really.

4473. You do not think the patent still is taken in a more concentrated form?—I do not think so. I have seen statements to the effect that a man who drinks patent still whiskey or a blend containing a higher amount of patent still whiskey will want more to satisfy himself, and so on; but I should think that only applied to very exceptional cases. I do not really think there is much in that.

4474. It is not a matter of more but a matter of greater dilution?—Quite so. I think if you take a pure patent still spirit—in the ordinary way there is no question of pure patent still or pure pot still, but it is a question of a blend—but even if you take pure patent still, I think with a fair dilution you will get sufficient flavour to satisfy you if that is the type of whiskey you like. That is the conclusion I have arrived at.

4475. (*Dr. G. S. Buchanan.*) The patent still spirit you drink yourself and give to your friends, I take it, is a matured spirit?—Yes.

4476. It is not a new spirit?—Certainly not. You will understand that I have only done that experimentally, and that I do not as a rule drink a grain spirit, because I prefer a blend.

4477. I quite understand that, and I quite followed all you have said about the importance of knowing what bye-products you were ordering, supposing you were giving whiskey as a drug, and you attach value to the bye-products. But, after all, is not this another question of degree? The same sort of argument would apply, we will say, to the difference between burgundy and port with regard to the question of giving a man burgundy or port during convalescence from illness or anything of that kind. You could not exactly specify all the particular bye-products and ethers and things that ought to be in the port or burgundy, but you could make a broad distinction between the two wines?—I rather think to get an analogy there one ought to compare different types, say, of burgundy and different types of claret—and not compare two entirely different classes of wine.

4478. I thought you told us in your *précis* that there were differences between these whiskies—that the difference between different kinds of grain whiskey and different kinds of malt whiskey in themselves were as great as between burgundy and claret?—I do not think so. I think I said something of the sort as to the differences. I would put it in this way:

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"Our remarks in this respect are to be taken as referring to individual members of the same class, for it is out of the question to compare the various classes with one another, as such a proceeding would be about as reasonable as comparing burgundy with claret or wines of the Rhine with those of the Moselle or stock bitter ale with a mild beer." What I mean is this. For instance, for a comparison take claret. You have the heavy St. Emilion wines, which are almost burgundies in character, they are so heavy. Then you have the light wines of the Cotes. And as intermediaries between them you have the Médoc wines; then you have a different type in the Graves. Those are all clarets, and yet they are distinctive wines. If a medical man is ordering claret for any specific reason, I think he ought to know something about it, and to know the type of wine he means to order, because a man who might stand a light Graves or a light Médoc wine might possibly not do with a heavy St. Emilion.

4479. But if the doctor cannot get accurate descriptions, which are inexpedient, according to you, he is not likely to make progress in knowledge until he gets them?—I think the medical man might know more about these things than he does as a rule, with all respect to him.

4480. He does not get trade descriptions to guide him?—I do not think it is a question of trade descriptions guiding him, but I think it is a question of his educating himself up to these things.

4481. (*Chairman.*) You recommend that the medical man should gain personal experience?—I think so.

4482. (*Dr. G. S. Buchanan.*) With regard to the samples you get from public-houses. What could you do if you had samples that you suspected to be poisonous, or especially deleterious? What do you do analytically?—To begin with, I should always taste the sample. I should get some line that way. If I got a high amount of nitrogen, or an exceptionally high amount of higher alcohols, or if I got evidence of a large amount of pyrrol, or any of the products that are likely to be present in methylated spirit, one could do all those things. I think in 9,999 cases out of 10,000 you would probably find nothing. Even now in the text books there is something to the effect that pepper and tar and all kinds of things were used to adulterate spirits with, but personally I have never come across such a case. I think it is high time that these things were taken out of the text books.

4483. It is the gross additions of that kind rather that you are speaking of. With regard to the amount of the sample collected, if you asked a man in a public-house for a quart bottle would he not think it rather suspicious, and would he give you the worst whiskey?—I think the messenger asked for a quart of Irish, or a quart of Scotch.

4484. It is common experience in sampling under the Food and Drugs Act that if you ask for an unusual quantity of any substance, they at once think that you want it for analysis?—I think in this case the messenger was suitably attired so as not to create suspicion.

4485. But retailers have heard of that too?—Anyhow, I did my best to collect bad samples and I failed.

4486. I recognise that, of course. The samples you have tested for nitrogen and for the presence of alkaloids were samples that had come to you in the ordinary way?—Yes, they were authenticated samples. I know they were all either Highland malts or Campbeltown's, or grain.

4487. But they were not separate samples of whiskies that had been associated, or suspected to be associated, with alcoholic neuritis, or any particular disease?—No.

4488. (*Dr. Horace T. Brown.*) You have given interesting evidence on a matter which may be of some importance, that is on the question of nitrogen contents of the whiskies. In the first part of your table, am I to understand that these nitrogen values represent the total nitrogen in the whiskey, or the amount of nitrogen which you were able to distil off by steam distillation by the method described below?—They were the means found by the method given below.

4489. Did you ever determine the relation of those numbers to the total nitrogen in the whiskey?—We tried by this method to get the total nitrogen. I do not see how you could arrive at it in any other way.

4490. For instance, after rendering your solution alkaline and distilling off with steam, could you determine the amount of nitrogen in the residue?—I assumed that if there was any nitrogen there it must be all volatile because the spirit has all been distilled

4491. Initially no doubt?—Initially.

4492. But you did not attempt to see if you had got the whole of it by that process of steam distillation?—We did not make a determination of the residue. If I understand you correctly it is this: that you think that although initially it might have been volatile, it might have condensed and formed a non-volatile product later.

4493. So you might have some nitrogenous matters derived from the cask which were non-volatile?—These were all new whiskies.

4494. You have never determined whether nitrogen decreases or increases with age?—No, never.

4495. Have you formed any idea as to what these nitrogenous bodies are?—I should think to a considerable extent they are probably ammonia, ammonia salts, amines, and products which one would expect to get to a certain extent on dry distillation. For instance, I did detect in one whiskey a trace of pyrrol.

4496. Would your pyrrol come over after having rendered the solution alkaline with caustic soda?—It might have resinified previously.

4497. The bodies you brought over might probably belong to what chemists call the cyclic nitrogen bases, such as pyridine, or something of that kind?—Your pyrrol would probably come over from an alkaline solution. I had some experience of that, because we distilled vast quantities of yeast, and we got huge quantities of pyrrol, and similar bodies, which do resinify enormously in acid solution.

4498. These bodies could not have been derived from the peat used for drying the malt?—I think that is probably where they do come from.

4499. But your very largest amount is in Lowland malt, where, I believe, peat is seldom used for drying off the malt?—No, it is still used, but not so much as formerly.

4500. You have them also in the grains to a very large extent?—Yes. There, of course, they would use a fair amount of malt.

4501. You do not think it is unlikely that they are derived from the fuel used in drying the malt?—I think that a part would come from that undoubtedly. A part might come from the wash.

4502. If they were pyridine bodies, or bodies analogous to that, these figures representing the nitrogen would require multiplying by five or six probably?—By about five or six.

4503. Then you say you have tested for alkaloids. By alkaloids, I suppose you mean the oxygenated bases, bodies like creatine, xanthine, and so on?—No, I had more in mind bodies like strychnine, and so on, because there had been statements to the effect that volatile bodies had been found in spirits obtained from decaying grain which had an effect similar to strychnine.

4504. I rather gathered that you were trying to determine whether any of these nitrogenous bodies in a whiskey were ordinary oxygenated bases or not. That was a question of adulteration that you were alluding to?—No, not of adulteration, but a question as to whether there was anything in the suggestion that you might get a volatile alkaloid body in the spirit.

4505. Do you not think that those observations are well worth following up, because some of these bases have strong physiological action, and if there is anything in the idea it is rather important to know more about it?—I think it would be interesting to follow up this question as to what these nitrogenous bodies are, but, personally, I do not think you would get anything in the way of alkaloids. I do not think so.

4506. (*Chairman.*) You have given whiskey a good character. Would you say there is no class of whiskey, as far as you know, which is what we call vicious, or injurious to health?—Yes.

4507. That is your view?—Yes.

4508. That does not apply, I am afraid, to all spirits. Take gin. There are some very vicious gins of low qualities, are there not?—I am afraid I do not know very much about gin. I am afraid when you get spirits which are made in tropical countries, where industrial knowledge is not very high, you sometimes do get spirits which are very bad.

4509. Will you take brandy, for instance? Do you get vicious qualities of brandy?—You get it in cheap brandies and cheap liqueurs—and in what they used to call Cape spirit.

4510. Would that be mostly in foreign brandy, or in British brandy?—I do not think there is anything of that kind in British brandy. British brandy is, I think, a very harmless liquid.

4511. Have you any knowledge as to whether there has been of late years an increased demand at certain public-houses for a very much cheaper whiskey than previously existed?—I do not think I could speak to that. I am afraid my knowledge scarcely extends to that.

4512. At any rate, you think that, however cheap it is, it must be probably only loss of strength, and that it does not amount to anything that is destructive to health?—That is my absolute opinion.

4513. (*Dr. Adeney.*) We will now go to the next section of your proof: it is with regard to the declaration on labels?—I think that was dealt with by the remarks of the Chairman this morning, and I do not know that I have anything to add to that except that with regard to use it is sometimes said that grain whiskey is used merely for cheapening. I can say I have personal experience of blends. I have seen the blending books, and I have seen the blending sheets, and so on, of whiskey, which is sold at as high a price as 25s. a gallon—that is without duty—consisting of very, very fine whiskies; and even there as much as 5 or 10 per cent. of grain whiskey would be put in in order to throw the malts together, and in order to prevent blueing, and so on.

4514. (*Chairman.*) Is that new whiskey?—No, my lord, 25 year old whiskey.

4515. That would be an enormously high price?—Yes, it was an enormously high price, but it was a very fine whiskey—the one I am referring to.

4516. (*Dr. G. S. Buchanan.*) And a fine old patent spirit was used?—Yes.

4517. (*Dr. Horace T. Brown.*) You regard a patent spirit as necessary for what you call marrying?—Yes, for the marrying, and also to prevent blueing.

4518. There is something in that?—Undoubtedly; and another thing is this, that I think also to the palate the patent spirit produces a somewhat cleaner effect. It throws the malts together, and they are not so cloying on the palate when there is a little grain whiskey added.

4519. (*Dr. Adeney.*) Would you describe them as not so oily?—Yes, not so oily and not so fat. I think you will see that in a blend of that class which is being sold at 25s. ex duty, an amount of 5 per cent. of grain whiskey, of which the price might be, perhaps, 2s. a gallon less than the malt, amounts to nothing at all practically. The blender would not do it if he had not some specific object.

4520. (*Mr. Guillemard.*) That would be 72s. a dozen to buy?—Yes.

4521. Without any profit?—It would be more than that. It would be a whiskey which probably would sell at 80s. It would be quite an exceptional whiskey.

4522. (*Dr. G. S. Buchanan.*) A bottle of wine is sometimes used for the purpose of marrying or assisting a blend?—I have never heard of it.

4523. (*Dr. Adeney.*) This great body of oiliness you refer to is characteristic of some of the Scotch pot still spirits?—Undoubtedly.

4524. But is not characteristic of the Irish whiskies, is it? For instance, would Jameson's or Power's whiskies be improved, do you think, by blending with patent still spirit?—I really should not care to say.

4525. Why I asked you was, that I gathered from your evidence there was a distinct difference between many of the Scotch pot still whiskies and the Irish in that particular of oiliness?—Yes, I think there is; there is a class difference.

4526. Now we might go on to the next section—that is, as to the limit of age. Do you consider an age limit necessary or desirable?—I think that if it could be done, if there were no objections to it, the consumer would certainly benefit if there was an age limit. He would certainly get a better whiskey all round. Whether it would really affect his health beneficially I should not care to say, but he would certainly be getting a better whiskey, and when one gets a thing which is good and which one likes, one feels happier, and one's general state of health is better on that account. Whether there is anything actually deleterious or harmful in the new whiskey I rather doubt, because in Scotland you find that many of the workmen in the distilleries prefer it new straight from the still, and they live to a good old age. I saw a man at one of the distilleries who was getting on for 80, and he had had whiskey new from the still every day of his life since he had been at the distillery, where he had been for many years.

4527. What is the effect in your opinion of ageing?—I think that we have a little more knowledge now than we had on the subject of ageing. I think there are two main processes: there is the disappearance of small traces of substances, such as pyrrol, sulphurous acid, sulphuretted hydrogen, and perhaps traces of nitriles. That is one thing. We have, with the exception of the nitriles, which I suspect for another reason entirely, found traces of these bodies in new spirits, and undoubtedly they are all bodies which in time would tend to disappear by oxidation or condensation. Then hand in hand with them undoubtedly there is a development of ethers and of acidity, which probably causes an increase in bouquet and roundness; but I think, if you were to take the new whiskey and to eliminate from that these small traces of undesirable things, you would probably have a potable whiskey straight away. But the secondary development makes the whiskey finer, but it is not absolutely necessary as far as making it potable goes.

4528. But as far as the quality is concerned, you have a development of new constituents?—Undoubtedly. That is set out very well in that table which I have referred to before—that is, the American paper published in January—which shows that there is a balance between ethers and acidity at the end of three years; that they then reach a point when they are both about equal in quantity, at any rate, as far as American whiskies go.

4529. So to that extent age improves the value?—I think so undoubtedly. There is no doubt about that, because one need only look at price lists in the trade to see that.

4530. Does that refer to patent still spirit?—I think so undoubtedly.

4531. Have you found these constituents which you say disappear on maturing in the patent still spirit as well as in the pot still?—To a far smaller extent. The only sample in which I actually detected pyrrol was in a heavy pot still whiskey.

4532. What did you find?—Traces of sulphurous acid and hydrogen.

4533. Nitriles?—I have not found nitriles, but what led me to think traces of nitriles might be there was from some work which we did, which actually arose out of this: We distilled a large quantity of yeast—several tons, in fact. There is a paper on that subject; I do not know whether you would care to see it, as it is in an entirely different direction, but it might be of some interest. We got among other things in the yeast trial a large quantity of nitriles. I had on occasion in new whiskey perceived an odour which was very reminiscent of this nitrile smell, and it was that which led me to think that in new whiskey we might have traces of nitriles. Whether there is anything in that I do not know, but it struck me it was very possible.

4534. There are good reasons why a matured whiskey should be protected if possible?—I think so, undoubtedly.

4535. Are there to your knowledge, from a trade point of view, any serious objections to putting an age limit upon whiskies?—As far as I know, and as far as the whiskey trade is concerned, I do not think

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there is any very serious objection to a moderate age limit.

4536. What would you call a moderate age limit?—I think two or three years. I do not think the trade as a whole would object to that. I am not speaking for them, and I do not wish to bind them or myself in any way; but I do not think that the bulk of the trade would object—in fact, I think a large portion of the trade would welcome it.

4537. Do you think two years would be sufficient to get rid of these undesirable constituents?—I think practically all whiskies would be drinkable at the end of two years. I would not go so far as to say that these undesirable constituents make the whiskey poisonous or actually deleterious, because we really have not got sufficient evidence.

4538. But they are undesirable?—Yes, they are undesirable, at any rate from the point of view of flavour.

4539. But you would not say so much from the point of view of health?—No, I think we should have to know rather more on the subject before we could speak about that.

4540. Do you know of any means that could be taken to make regulations for an age limit effective?—I take it if an age limit were imposed it would be within the power of the Excise to see that nothing was cleared from bond under a certain age, and unless it were for purposes of methylation I should think it could go under a methylator's bond to the methylating establishment.

4541. I take it you would submit patent still spirit to the age limit as well as the pot still?—Of course, the patent still spirit takes less time to mature, but I do not think there would be any objection to putting it at two years all round.

4542. (*Dr. Horace T. Brown.*) I do not quite understand why you propose an obligatory time limit when the flavour itself is settling the matter at present. You say that the public will not take very new whiskey. Is not the trade settling that matter in the light of public opinion? Do you think it requires legislation in order to enforce that?—I do not think a case has been made out for legislation on the ground that young whiskey is absolutely deleterious to health. I do not think a case has been made out for that. All I say is that as far as the consumer is concerned I think he would probably be getting a better article. I am speaking now of the cheaper whiskies, and this does not apply to the higher class whiskies at all. If you take any well-known brands this does not matter to them a bit because all their stuff is kept in bond for four or five years at least; but taking the cheaper whiskies I think the consumer would be getting a better article. I do not say it is necessary because I do not think a case has been made out strong enough to show that it is absolutely deleterious.

4543. I suppose many attempts have been made to produce in a short time, artificially, the usual effect of age in whiskies?—Yes.

4544. There are a great number of processes, are there not?—Yes. I have a few samples which might interest you. I have here some spirit from that continuous still which was treated with charcoal, and I think it has aged it rather appreciably. That was in the laboratory.

4545. Is the effect quite in the direction of ordinary ageing?—I think so.

4546. There is a process for separating the aldehydes and furfural in whiskey—that is Dr. Hewett's process?—Yes.

4547. What is the effect produced by that? Is it analogous to the effect produced by ordinary age?—It certainly does produce an effect similar to that of ageing. If you take a whiskey and distil it, and put Dr. Hewett's re-agent into the low wines still and then compare that with whiskey without it, undoubtedly the whiskey treated with that re-agent has an apparent age of about a year or 18 months beyond that of the new whiskey. But I should not go so far as to say that if you took those two whiskies at the end of five years that the one which had been treated would be as fine a whiskey as the one which had not been treated.

4548. Is the process sufficiently old to have given us samples of that age?—I think Dr. Hewett would probably be able to produce something in that line.

4549. You suggest that the alteration produced by the phenyl-hydrazine-sulphonate of sodium method are in exactly the same direction as the alteration produced by age?—I do, to a certain extent. I think it is essentially a de-aldehyding agent. Whether it takes out anything else as well I do not know; possibly it does; but it certainly reduces the furfural which also occurs in ordinary cask maturation of Scotch and Irish whiskies, and not in American whiskies, because there they get an increase in furfural from the cask; and it also reduces the aldehydes generally.

4550. Do you find, as a rule, less aldehydes and less furfural in old whiskies than in new whiskies?—Less furfural, but not less aldehydes.

4551. (*Dr. G. S. Buchanan.*) Could you tell us what are the important factors in maturing as regards the casks themselves. What ought a cask to be made of, for instance?—They are usually made of American oak.

4552. You can get your maturing changes with a plain oak cask as well as from a sherry cask?—Undoubtedly, except that I think the sherry casks hasten maturation, quite apart from the sherry flavour. I think there is no doubt about that, because I think that by far the greater part of whiskey is matured in plain wood. There is not sherry enough to go round.

4553. As a practical matter, are the casks that are used in distilleries or bonded warehouses for maturing generally about the same size?—Yes, as a rule. There are two sizes: there is the cask and the butt, which is a much larger cask.

4554. I suppose the amount of surface has something to do with the rapidity of the change?—I should say so, decidedly.

4555. (*Mr. Guillemard.*) I want to ask you one question with regard to the compulsory age of spirits. I quite realised that your opinion did not amount to a very definite recommendation that there was a necessity for compulsory ageing of spirits. I think it amounted only to something rather tentative, that you thought, on the whole, the consumer would get something rather better and nicer?—I think that is what it amounts to.

4556. Looking back to the Report of the 1890-91 Committee, the question of age was one of the things they took a very definite line about. They put into their Report their opinion that compulsory bonding of spirits for a certain period is unnecessary, and would harass the trade. You could not speak for the trade?—No.

4557. They further said it is not desirable to pass any compulsory law in regard to age; and altogether they said a good deal about it in their Report. For instance, they say this: "The testimony was practically unanimous that compulsory bonding would harass the trade, and was altogether unnecessary. This opinion was given by experts from England, Scotland, and Ireland. They stated there was a growing demand for old whiskies, and that this was sufficient to induce vendors to keep spirits in bond, especially as the rise in price paid them for doing so." I have no doubt you are familiar with what I am reading to you?—Yes, quite.

4558. Do you think that the trade generally will concur in your view that, on the whole, the ageing of spirits could not be regarded as harassing?—I think, though I may be wrong, that you will find a considerable section of the trade will raise no objection.

4559. I have noticed that during the 1890-91 Committee the trade, as far as I remember without any variation, all expressed one opinion—that it would be harassing?—Yes.

4560. While before us some traders have taken the line that they would not object to it?—I think there probably has been some modification, at any rate, in a very considerable, I will not say very large, proportion of the trade.

4561. Have you formed any opinion as to the explanation for that, because they formerly took a very definite line? They took the line that the compulsory ageing was obviously a good thing for the pot still product. They said it was plainly necessary, and that before you can drink it you must mature it; that on the other hand, the patent still product improved only slightly with age, and therefore they said that compulsory bonding would handicap the patent still men,

because it would be making them do something which was not really necessary. Do you think the opinion on that point has altered since?—I think it has been modified to some extent. I would not speak with any certainty on that. I have spoken with a good many people, both in the patent still trade as well as in the pot still trade, and as far as they are concerned, they do not seem to raise any objection.

4562. The reason that I ask you was that up to now this Report of the 1890-91 Committee still holds the field unless it is shaken by anything that is decided by this Commission?—Yes.

4563. And this is the first point in your evidence that I know of where you take a line counter to that Report?—It was really rather a suggestion—a modified opinion—and I really do not express any definite view on it. My view is that if the trade can accept it, and if they no longer think it harasses them, on the whole the consumer would be the gainer. I think that is about all it amounts to.

4564. (*Dr. Horace T. Brown.*) Might you not also use the same argument with regard to wine?—Yes, I think you might.

4565. (*Chairman.*) I think the result is, you do not give a very confident opinion on the subject?—I am afraid not.

4566. (*Mr. Guillemard.*) At any rate, in this respect you still concur with the 1890-91 Report that you do not think there is any question of public health in the compulsory bonding?—I do not think there is sufficient evidence there to express any definite view.

4567. (*Chairman.*) The Commission are much obliged to you for the very valuable assistance you have given them by your evidence.

The witness withdrew.

Mr. Archibald Cowan, called.

Mr. A. Cowan.

4568. (*Chairman.*) You are senior partner of Archibald Cowan, Mason, and Co., wholesale wine and spirit merchants, of Leith?—Yes.

4569. How long have you been in the trade?—For 58 years.

4570. What has been your particular trade? What have you been dealing in?—For the first five years I was with John Gray and Sons, wholesale and retail general grocers and dealers in whiskies and wines.

4571. Will you keep to whiskies for the moment. Where did you obtain your whiskies from?—We got our whiskey from Haddington—that is patent grain whiskey—and a very small portion from Islay—the Bowmore Distillery.

4572. Have they a distillery there now at Haddington?—No, it has ceased.

4573. What did you get from them?—A patent grain whiskey.

4574. That would be patent still?—Yes.

4575. What did you get from Islay?—A pure malt whiskey.

4576. Did you blend?—Yes, with pot still. We did not blend any at that time, but we sold it pure.

4577. According to the will of the customer?—Yes.

4578. What did you find as to the demand? Which had you the greater demand for?—We sold about 90 gallons of patent whiskey to 10 gallons of pot still.

4579. How do you account for that? Do you think the excess was produced by people wishing to have it because they liked it?—The flavour was too strong. They did not like so much flavour with the whiskey.

4580. Was the price too high, do you think?—The price was not so very much dearer at that time. We sold the whiskey at that time at from 5s. to 7s. 6d. a gallon according to strength.

4581. Which was that—the pot?—Both pot and patent.

4582. Did you pay the same price?—No, we paid a little less.

4583. A little less for which?—For the patent.

4584. I will not inquire too much, Mr. Cowan. In your neighbourhood what is the meaning generally applied to the words "a little less"?—We paid about 10d. a gallon less for the patent still.

4585. That is nothing in Scotland, is it? Are these the only two whiskies you kept, the patent and the Islay?—Those were the only two when I was in Dalkeith—that is from 1850 to 1855.

4586. Then you went to Edinburgh?—Yes, I went to Edinburgh after that, and I was a partner there for 35 years with wholesale whiskey merchants.

4587. In what capacity were you at Edinburgh?—The first two years I was the cashier, and after that I was three years travelling in Scotland, and after that I was assumed a partner.

4588. In what house?—Archibald Aikman and Co.

4589. What did you deal in?—In general groceries, sugar, tea, whiskey and wines.

4590. What whiskies did you deal in?—Cambus whiskey and a patent grain whiskey made at Seggie, near St. Andrews.

4591. What was the Cambus whiskey?—Cambus patent.

4592. Was the grain whiskey from any distillery?—From Seggie, about four miles from St. Andrews.

4593. Did you deal in any pot still whiskey at all then?—Yes, we used to get a very, very small portion from Balblair, in Ross-shire.

4594. And you sold it pure?—We sold it pure. We had no blending at that time.

4595. What was the difference in price between those two?—Much about the same—about 10d. to 1s.

4596. And the little less you speak of is the same?—Yes, about 10d. to 1s.

4597. Did you find that the public were asking for patent whiskey as such, or did you give it to them? When they said, "Give me whiskey," should you give them patent whiskey?—They asked for whiskey only. They never asked for any malt whiskey, or patent whiskey; but they simply said that they wanted a bottle of whiskey—a good whiskey.

4598. They would not say Scotch whiskey, but simply whiskey?—Just whiskey.

4599. How did you discriminate? Did you ever give them pot whiskey unless it was asked for?—We would have some people who would ask specially for pot whiskey—Highland whiskey, but very few.

4600. Was that what they knew it by—by the name Highland whiskey?—Yes, Highland whiskey.

4601. Did you make any difference in your price?—Yes, we used to. The wholesale price was about 2s. a gallon, duty paid, difference.

4602. What is your idea as to the relative merits of these two whiskies, patent and pot still whiskey?—For the last 35 years I have drunk at home myself two-thirds grain whiskey and one-third malt.

4603. What was the malt?—The malt whiskey is composed sometimes of spirit from two or three different malt distilleries, and the grain is composed, perhaps, of spirit of two distilleries—a blend. I prefer that, it is mild and very nice, and agrees with me.

4604. What do you say was the proportion of your blend?—Two-thirds grain patent whiskey and one-third malt or pot still whiskey.

4605. You have given us your experience of selling and your experience as a private individual. Do you think that is as good as any whiskey you can obtain for the purpose of flavour and palate?—I think it is the best whiskey anybody could possibly drink; it is so wholesome, and it is not too heavy. People will not drink heavy whiskies now, as a rule.

4606. Should you say that pure pot still whiskey is heavy to drink?—No, not so heavy as malt whiskey.

4607. I am speaking of pot still whiskey. Do you think that pure pot still whiskey is too heavy to drink?—Yes. There are some Highland distilleries that turn out whiskey not so heavy as others; but there are some Highland distilleries again where the whiskey is very, very heavy, and very thick.

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4608. What should you say as to the drinking of a pure patent still whiskey unblended?—It is very first-rate, I think. I could drink it myself very well; but I prefer just a small portion of malt with a much larger portion of patent or grain whiskey.

4609. But comparing patent still with pot still, patent still has not got the flavour or the bouquet that the pot still has, has it?—Not quite so much, but it has a flavour.

4610. Which do you think an ordinary customer would prefer? If a person went and asked for whiskey, would they prefer having a glass of pot still or patent still whiskey?—It depends on the part of the country. Round about Edinburgh, in the mining districts, they prefer a silent whiskey or a patent whiskey, the miners particularly. They do not care for heavy whiskey. They like a light whiskey, and prefer that to a malt whiskey. If we put too much malt whiskey in the blend we are certain to have complaints.

4611. Is there any part of the country where they do prefer a malt whiskey?—Yes, north of the Grampians, when you get down to Kingussie, they do.

4612. Is that dependent upon the climate?—No, not altogether, because there are some parts where they drink a heavy malt whiskey, such as in Morayshire. I think it is the habits of the people, and what they have been accustomed to drinking. Before the Highland Railway was made, 40 years ago, they got their whiskey from a local distillery within 10 or 12 miles of them, and they acquired a taste for heavy malt whiskey.

4613. Part of Morayshire would run up to Glen Livet?—Glen Livet is in Aberdeenshire, I think.

4614. You do sell, in your Edinburgh house, blended whiskey?—Yes, largely blended whiskey; it is mostly blended whiskey.

4615. Does your blend follow the proportions you mentioned to us just now that you were drinking yourself?—There are some blends we put in half malt and half grain to suit different classes of customers, and others again take a small portion of grain or patent still whiskey.

4616. Does the variation exist in order to meet the public taste?—Exactly.

4617. Some people like a proportion of the stronger whiskey, that is, pot still, and others do not like such heavy whiskey?—Exactly, in Inverness-shire, Morayshire, Banffshire, they all like strong heavy whiskies.

4618. Do you sell these whiskies in the bottle sent out in cases?—Mostly in casks. We do sell it in cases. We bottle whiskey and sell to the trade.

4619. Do you put any labels either on the casks or the bottles?—Yes, we put on "Scotch Whiskey," "Glen Finnan Whiskey," and "Glen Livet Whiskey."

4620. What do you put on your blends?—One of our blends is Glen Finnan, and the other is Mountain and Moor, and another one is Heather Lintie.

4621. Where do you get those names from—from a distillery?—I am a Jacobite. I took Glen Finnan from the fact that Prince Charlie landed there. He landed at the west of Inverness-shire.

4622. A pure Jacobite would not have stood a blend. When you get a blend why do you call it by this Jacobite name?—I thought it was a good name to take for a blend of whiskey.

4623. As a good and loyal subject you put that on, I suppose?—Yes.

4624. What is the proportion in the blend of which you sell the most?—About 30 per cent. malt and 70 per cent. of grain. That is the blend I like most, and I recommend it.

4625. I suppose these distilleries differ in their products? They have a distinctive character of whiskey at most of the distilleries?—Yes, everyone of them.

4626. And that may influence the blend a little?—Yes.

4627. I rather gathered from what you said that the public do not trouble themselves very much about the exact blend or even the distillery it comes from?—No, they very seldom ask. Even here, when I had a glass of whiskey, the man could not tell me whether it was patent or pot still. I got my lunch and asked for a glass of whiskey-and-soda with it, and when it came in I said, "Is this patent or pot still whiskey?" and the man said, "I do not know the difference between pot still and patent. I never heard the name before."

4628. I suppose you would not have any standard to regulate the blend established?—I think not.

4629. What do you say about the age limit?—I do not object to it, but I do not see any necessity for it. If I were a labouring man, earning from 20s. to 25s. a week, and liked a glass or two of whiskey, and could not afford to take perhaps more than three glasses in a week, why should I have to pay 1d. a glass more for my whiskey?

4630. Then, of course, there must be some loss of interest to the trader. He must lose something while it is unproductive?—New whiskey is cheaper than old whiskey, of course, but it is not proved to be unwholesome. I want to show you this sample. This sample is to go against the Irish evidence where they talk about old grain or patent whiskey being worth only about 3s. per proof gallon. I paid 11s. 2d. for that whiskey, which is 20 years old. I paid 11s. 2d. a gallon for it; 9s. duty; 20s. 2d. duty paid, 18 under proof.

4631. (*Mr. Guillemard.*) Will you say what your experience has been since you were engaged in this business? Have you noticed any change in the taste of the general drinker in Scotland? Do you see any tendency to drink more patent or pot still or blends?—They are blends mostly.

4632. The taste is coming to blend, is it?—Yes, we never bottled patent whiskey pure until the last inquiry in London, about 18 months ago. I thought, after Sir James Dewar's evidence, that it advertised the Cambus whiskey.

4633. After the Islington case?—Yes, and I began to put Cambus whiskey into bottle, and I sold it. Here is the thing and you can look at it. There are different people that I sent it to in every part of Scotland. It is a pure grain whiskey.

4634. As far as your experience goes, one result of the Islington case has been to increase the sale of patent still whiskey in Scotland?—Yes.

4635. (*Dr. Cushny.*) Most people, I understand, simply order "whiskey" from you, do they not?—Mostly, but we have some people that order a cask of Glen Livet whiskey, or a hogshead, perhaps, of Cardow. That is in the Glen Livet district; another is Balmenach, and another is Glenfarclas—they have their different tastes.

4636. Do you sell always the same blend? I do not understand whether you always supply the same whiskey, or whether you have several kinds?—We like to draw our whiskies from the same distilleries, if possible.

4637. And mix them or blend them yourself in the same way?—Yes; perhaps so many parts of one distillery, so many of another, and so many of another, so as to have a uniform blend.

4638. I suppose, to people writing specifying simply "whiskey" you send exactly the same whiskey?—Yes; what they have had before.

4639. (*Mr. J. Y. Buchanan.*) I suppose your customers never ask for Scotch whiskey, but they ask for "whiskey"?—Yes, just "whiskey."

4640. And it is perfectly understood that it is Scotch whiskey?—Yes.

4641. Do you remember when first patent still whiskey was put on the market in Scotland?—That was about five or six years before my time.

4642. About what date?—I think it was about 1845.

4643. I think the Caledonian Distillery was the first?—No, I do not think it was the Caledonian that was the first. I think the Haddington, where we get our whiskey, was the first.

4644. Did they have a Coffey still— a patent still—there?—Yes.

4645. The principal manufacturer of patent still was the Caledonian, was it not?—The Seggie was; Seggie is near St. Andrews. They used to grow a very good barley in the East of Fife. They had a very good grain whiskey; they used to have a better grain whiskey almost than Cambus.

4646. In Glasgow and Edinburgh I suppose there are a good many public houses where patent still whiskey is sold and wanted?—I think so, largely.

4647. Amongst the working class, is it your experience that, if they have, as you say, only money for

three glasses of whiskey a week, they prefer it?—Yes, they do like it.

4648. They get more for their money?—Yes, especially with miners. It is not like people in the Highlands; they can drink anything. If you are fishing in the Highlands it does not matter what whiskey you have—it goes down, and it does not hurt you.

4649. But in towns, for the labourers, do they prefer it?—Some of them like a little more flavour. I think shoemakers and tailors prefer it light.

4650. When you are supplying public houses in Glasgow or in Edinburgh, is it mostly the patent or the blended?—The blended mostly. They are the larger buyers. We sell them a patent whiskey, and we sell them malt whiskey, and they blend it themselves. We do that through the whole of Scotland.

4651. It is recently, within your recollection, that you began to supply blend whiskey to customers?—Yes; about 30 years ago.

4652. (*Dr. Adeney.*) What would you pay for a glass of patent spirit over the counter?—For a malt whiskey?

4653. No, patent. What would an ordinary customer going into a public house pay in Edinburgh?—Glasses of whiskey in Edinburgh are double the size that you get them here. That is one of the drawbacks here that one has to take two glasses of whiskey to one big bottle of soda water.

4654. Taking a customer in a public house at Edinburgh what would he pay for a glass of whiskey?—There are 32 gills of whiskey to the gallon, and a glass of whiskey is half a gill, so that is 64. Do you want to know the price?

4655. What would an ordinary customer going into a public house in Edinburgh pay for a glass of whiskey—for patent still whiskey?—4d.

4656. What would he pay for malt whiskey?—5d. and 6d.

4657. Supposing he went in and asked simply for "whiskey" what would he get and pay for?—It depends on the class of place. If he went into the Caledonian Railway Station Hotel, or the North British Station Hotel, and asked for a glass of whiskey he would have to pay 6d., and if he asked for an Extra Special, which may not be quite so good, they would charge him 8d.

4658. Now I want to ask you a question with reference to public houses where you say the mining class would go and ask for a glass of whiskey. What would they charge them?—4d.; but you must remember that the glass is double the size that you get here.

4659. We are talking about the Edinburgh practice—the Scotch size. You wish to convey that the consumer would actually get the benefit of a cheap whiskey?—Certainly. The great bulk of working men are sober, and there is not one man in 100 who is a drunkard.

4660. I am talking of the legitimate use of whiskey. You feel confident that the man in the street does get the benefit as to price if he is satisfied with the patent still whiskey, or the cheaper whiskey?—Yes.

4661. Have you any experience of Irish whiskey?—We do a little in Irish whiskey both in pot and patent.

4662. Do you blend the pot?—Yes, we blend the pot and the patent. We get them from Ireland, but do a very small trade in them.

4663. Do you think it is necessary to blend the best classes of Irish pot still whiskey—do you think it is as necessary as with some of the Scotch pot still whiskies?—I think the worst whiskey I ever tasted in my life was at the Dublin Exhibition, and that was Irish pot still whiskey.

4664. Are you sure it was pot still?—Yes. I was ill for two or three days afterwards.

4665. Are you sure it was pot still?—Yes. I was told so. It was much too strong in flavour for me. At Belfast again it is a good deal of it patent.

4666. (*Dr. G. S. Buchanan.*) Do you buy patent still at two years' old?—No, we buy it all new, and sometimes if we run short of very old whiskey, 20-year-old whiskey, we have to search for it, and seek for it, before we can get it; but we got it bonded in 1888.

4667. Can you tell me how much your ordinary new whiskey has increased in value after two or three years; that is, in value to you?—It increases in value to this extent, that we put on about 3d. a year.

4668. Is that so much that the customer who at present pays 4d. a glass for new whiskey would have to pay 5d. or 4½d. for whiskey that had been kept two or three years?—Yes.

4669. It would give you a nicely added profit?—There is shrinkage both in strength and in quantity.

4670. There is one other point I want to ask you about. You spoke about the increased sale of patent still whiskey in Scotland since the Islington discussion. You base that on the fact that you were very successful with a sale of Cambus, do you not? You started selling Cambus?—We always used to sell a great deal of Cambus whiskey in hogsheads and in puncheons, but after that case I thought that the people would be anxious to see what this Cambus was, and I put it into bottle. I think we have sold about 2,000 dozen of it.

4671. You sell it as grain whiskey?—As Cambus grain whiskey.

4672. You said it was grain whiskey?—No; we sold it as Cambus whiskey.

4673. It says so on the bottle—grain whiskey?—No, Cambus whiskey.

4674. It is advertised as grain spirit?—Yes.

4675. There is no objection to putting it on the bottle? You have no objection to saying the grain spirit is grain whiskey?—There is no necessity for it.

4676. But you see no objection? In this particular case it would have helped your trade?—No; I am old-fashioned, and I do not like to make changes.

4677. Now a question about the miners. Did the miners who have this patent still whiskey usually have a special taste for the new patent still whiskey? Do they also take much water with it?—I could not say.

4678. It makes a difference, does it not?—I think they like a stiff glass.

4679. Can you account for the fact that they prefer patent still spirit?—Yes; it is because malt is so heavy.

4680. Do you think the fact that they do not wish to dilute it, and that they wish to have a fairly strong alcohol has something to do with it?—That may be so.

4681. (*Dr. Horace T. Brown.*) This sample that you have handed in is Cameron Bridge, 20 years old?—Yes; bonded in March, 1888, in sherry casks.

4682. What is the value of it a gallon in bond?—I paid 11s. 2d. a gallon for it in bond, at the strength of 18 under proof. It has lost strength. It was bonded at 11 and 18, that is 29 strength that it has lost.

4683. This is not in a plain cask?—No; it was in sherry wood.

4684. Is this the natural colour of it?—We got it for one of the leading hotels in Edinburgh. A county gentleman wished to have a cask of Cameron Bridge whiskey, the oldest that could be got, if it was sound, and free from the taste of wood.

4685. Is this the natural colour?—Yes.

4686. It has not been coloured?—No.

4687. I should like you to take this back?—You can have it. We never made any headway in Scotland until we began to blend whiskey: we never could get a whiskey into Australia or India until we began to blend them; they would not have Highland malt whiskies. It was the skill of the blenders that put brandy out of Australia.

4688. (*Dr. G. S. Buchanan.*) When you are sending to Australia now, do you have to make any declaration as to age?—No.

4689. Do they admit your new whiskey? Do you send any new whiskey?—We have not been sending any new whiskey to Australia lately.

4690. You do not send it?—No.

The witness withdrew.

Adjourned to Monday next, 6th April, at 12 o'clock.

TENTH DAY.

Monday, 6th April, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. W. Virtue.

6 April 1908.

Mr. WILLIAM VIRTUE, called.

4691. (*Chairman.*) You are the Managing Director of the United Distilleries Company, Limited, of Belfast?—I am.

4692. I believe you have held that position since 1902?—Yes, since the Company was formed.

4693. Previous to that were you Managing Director of David Watt and Co., Limited, in Londonderry, for 12 years?—Yes.

4694. The United Distilleries Company includes the Irish Distillery, Limited, of Belfast, the Avoniel Distillery of Belfast, and the old company of David Watt and Co., of Londonderry?—Yes.

4695. How many distilleries does your company own?—We have four distilleries, two of which are in Belfast and two in Londonderry.

4696. The two in Belfast, I believe, are both pot and patent stills?—Yes, both.

4697. We will go back to that in a moment. The distillery in Abbey Street, Londonderry, is patent still only?—Yes, patent still only.

4698. And the Waterside Distillery, Londonderry, is pot still only?—Yes.

4699. So you have all the variations, patent still only, pot still only, and pot and patent still jointly?—Yes, my lord.

4700. What is your average annual output?—Between five and six million gallons yearly of patent still whiskey, and about 250,000 gallons of pot still whiskey.

4701. Can you give me the relative production of the distilleries which produce pot and patent still both? First of all, you have two at Belfast, which you say are both pot and patent stills?—Yes.

4702. Can you give me the relative production there?—About four million gallons of patent still. Only one of the distilleries in Belfast is making pot still at present.

4703. But can you tell me your average, running over some years?—About 100,000 gallons of pot still whiskey in Belfast, and about 150,000 gallons in Londonderry.

4704. And the patent still?—The patent still is pretty nearly from a million and a half to two million gallons at each distillery. A million and a half to two millions at Londonderry, and a million and a half to two million gallons at each of our Belfast distilleries.

4705. I want to know the cause of the difference. The patent still, I understand, runs throughout the year?—Yes.

4706. How long does the pot still run?—About six months in the year.

4707. Then what is the cause of that difference?—There is a greater demand for patent still.

4708. You do not want to work the pot still more?—No. Of course, it is more profitable to work a pot still distillery in the cold weather, and the pot still distiller tries therefore to concentrate his work as much as possible into the colder months of the year.

4709. (*Dr. Horace T. Brown.*) It is determined by his malting, I suppose?—To a considerable extent.

4710. (*Chairman.*) Will you explain why it is more advantageous to work in the cooler time?—First of all there is the question of malting, which Dr. Brown has referred to, and then there is the question of water for cooling purposes, and there is also the question of the bye-products—the disposal of the grains or draff, for which the demand in summer is not so good as it is in winter.

4711. Whatever be the cause of the discrepancy do you produce as much of the pot still whiskey as you have demand for?—We do undoubtedly.

4712. To what do you attribute the greater demand for the patent still?—The public seem to prefer a milder flavoured spirit nowadays than used to be the case, and no doubt also the cost has something to do with it.

4713. First with regard to the milder flavour. Is it the fact that the pot still whiskey is a much stronger flavour?—Undoubtedly so. There are great variations in that also, but taking it as a class pot still whiskey is undoubtedly more highly flavoured, although, as I say, there are great variations.

4714. What is the cause of that higher flavour compared to the patent still?—The greater proportion of the bye-products that pass over during distillation in the pot still than is the case in the patent still.

4715. With regard to ingredients, what is the difference in ingredients between the pot and the patent still in making the whiskey?—Do you want the ingredients in our distilleries?

4716. As between the pot and the patent still, has the difference of ingredient in existence caused any difference in flavour?—I do not think it has, materially. We have used, and do sometimes use, practically the same materials in the patent still distillation as in the pot still distillation, and although every sort of grain does give you more or less of a distinctive flavour you get that same distinctive flavour in a patent still as in a pot still, though not to such a great extent.

4717. This is a matter of degree, but in your opinion is the stronger flavour in the pot still whiskey at all attributable to the ingredients you use as compared to the patent still?—No, my lord, I should say not.

4718. Is there any difference in the ingredients used?—There is a difference in ours. We do use different materials.

4719. What is that difference?—In our pot still distilleries we use barley malt, barley, and occasionally small quantities of rye, wheat and oats. In the distillation of patent still whiskey we use barley malt, rye and maize.

4720. (*Mr. Guillemard.*) No unmalted barley?—No.

4721. (*Chairman.*) I daresay you can only give an average, but what is about the quantity of maize you use in the patent still?—We use about one-third of the total mash. We rarely go below 27 per cent.—from 27 per cent. up to 30 or 33—I have rather underestimated the maize, and should say the maize is about 36 or 37 per cent. as a rule.

4722. Do you ever use any maize in the pot still?—Not as a rule; we have used it.

4723. But as a rule you do not?—No.

4724. What is the reason of your drawing a distinction between maize in the one case and not in the other?—In the case of the pot stills ours is a very old distillery, and we have been producing pot still whiskey for many years, and every distillery which has been working for a length of time acquires a reputation for having a whiskey of a particular character, and the character of our whiskey has been derived from the use of materials not including maize. If we were to use maize, or if we were to use, say, a greater proportion of rye, or even a greater proportion of malt than we have been in the habit of doing it would alter the flavour, and although you might have a better whiskey, you would have customers complaining that it was not the same. These customers have been using it probably for many years in making up their blended whiskies, and if you sent them a whiskey different from that which they were in the habit of getting it would alter the charac ter of their blend, and you would continually have complaints. We dare not really alter the materials materially, neither in the direction of using maize nor in the direction of using a greater proportion of rye, or wheat, or any other grain.

4725. Are your pot still distilleries older, in point of existence, than the patent still distilleries?—No, my lord.

4726. Then your observations would equally apply to the patent still. Why did you begin to use maize in the patent still and not begin to use it in the pot still?—Because in the patent still, whereas it does allow flavour to pass over, it does not allow so much flavour, and you can use a greater proportion of maize, or a greater proportion of rye, or a greater proportion of any other grain without influencing to the same degree the flavour of your whiskey. The amount of flavour that the patent still allows to pass over into the spirit is a matter of process.

4727. It is really that the different process favours the use of the maize?—Unquestionably.

4728. You mentioned the question of price influencing the purchaser. What is the difference, taking the average, between the pot still product and the patent still product?—The difference in the cost price of making the two, do you mean?

4729. That is the cost of making it to you?—The cost of making it to us includes the cost of the grain, the cost of labour, and the coal. I give instances of actual distillations as carried out in the pot stills at our Waterside Distillery, Londonderry, the grist used for which may be regarded as a fair average of what is used for making Irish pot still whiskey, namely, 38 per cent. of malted barley, 58 per cent. of unmalted barley, and 4 per cent. of oats. In this instance the grain cost 17·12 pence per proof gallon of spirit produced; labour cost 1·06 pence per proof gallon of spirit produced; coal cost 2·28 pence per proof gallon of spirit produced; making a total of 20·46 pence per proof gallon of spirit produced. Then to take the comparative test in the patent still distillery, at Abbey Street, Londonderry, we used grist there which is the average of what we use at all our distilleries, namely, 28 per cent. of malted barley, 36 of rye, and 36 per cent. of maize. The cost there works out for grain 15·65 pence per proof gallon of spirit produced; labour 1·16 pence per proof gallon of spirit produced; coal 1·01 pence per proof gallon of spirit produced; making a total of 17·82 pence per proof gallon of spirit produced.

4730. Labour is a little higher?—Labour is a little higher. The pot still costs, therefore, 1·47 pence per proof gallon more than the patent still for grain, and 1·17 pence per proof gallon more for coal.

4731. About 2¾d. altogether?—2¾d. or 2½d. is the total difference in cost price for grain, fuel, and labour.

4732. Do these statements as to the proportions of the materials used and as to the price represent a fair average of the productions from your different distilleries?—Yes.

4733. And as far as you know it represents the cost more or less generally of Irish whiskey?—Yes. I submit particulars of these mashes to the Commission (*handing in documents*). There are two there. Lest it might be thought the results obtained this year were abnormal owing to the high price of grain this season, I have given similar particulars for the corresponding period of last year.

4734. I do not wish to enter into particulars of your trade, therefore you need not answer what I am putting to you unless you like. You have told us what it has cost you at each of your distilleries. Would you care to tell us what difference of charge you make when you are selling? I do not know whether you would want that particular to be gone into as to the profits you are making?—I am not sure that I do.

4735. Perhaps you would like time to think about that?—Yes, I would rather.

4736. Now to go back to your *précis* of evidence, I believe the Irish trade is not split up into different sections like the Scotch trade?—No, my lord, it is not like the Scotch trade, that is to say, there are no divisions such as Highlands, Lowlands, and Campbeltowns.

4737. But I believe your division really is a division between pot stills and patent stills?—That is so, broadly speaking.

4738. In sending out your whiskey to the trade does it carry with it the name of the distillery from which it comes?—Usually it does; that is the usual way in which whiskey is sold in Ireland to the wholesale merchant by the name of the distillery.

4739. Would that be known to the public if they were purchasing?—In some cases it would.

4740. Would a Belfast man be likely to ask for his Belfast whiskey and in Londonderry for his Londonderry whiskey—I mean a member of the public purchasing, not a trade purchaser?—The general public might ask for the make of a particular distillery: that is often the case in Ireland.

4741. I recollect a great many years ago that Bushmills had a great reputation as a distillery?—Yes, you still find that the public sometimes ask for Bushmills, or they may ask for any other of the distillery makes in Ireland.

4742. What is your practice in selling? To whom do you sell from the distilleries; who is the first purchaser?—We sell almost entirely to the wholesale merchants and blenders.

4743. They are both merchants and blenders?—As a rule.

4744. And from what you have told us you supply to them a much greater quantity of the patent still than of the pot still?—Yes, my lord.

4745. I suppose, as far as you know, their demand on you depends on the demand of the public on them?—That is so.

4746. Do these blenders blend on their own premises?—Yes; either on their own premises or, it may be, in an Excise or Customs bond.

4747. Do they sell under the name of the distillery from which they have obtained it?—In some cases.

4748. When it is blended would they blend simply with your whiskey, or would they blend with your whiskey and another?—Usually various whiskies.

4749. That, of course, again is to meet the public taste?—Exactly.

4750. What would you say yourself from your practical observation, and from what you have been told by others, is the blended whiskey a very acceptable whiskey from the point of view of taste?—I think so, undoubtedly.

4751. What comparison do you draw between the blended whiskey and pure pot still or patent still?—It is a question of the degree of flavour. The pot still as a rule has a very much more decided and strong flavour.

4752. Of course, it is a matter of taste, but would that strong flavour at all affect the digestion, when it is a very strong flavour?—I could not say, my lord.

4753. Now take the ordinary consumption in a house where a man has been out all day, an ordinary moderate consumer. Would it be blended whiskey that would be consumed?—Not, perhaps, so much is that the case in Ireland, although there is a very large quantity—probably more—blended whiskey than self whiskey drunk in Ireland, as well as in Scotland and England; still, I do think you find, perhaps, self whiskey more general—that is, you can procure in Ireland self whiskies more readily than you can procure them in England or Scotland, although the greater proportion of the whiskey sold is a blended whiskey.

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4754. By self whiskey you mean unblended whiskey?—Yes.

4755. Then, according to your statement, there must be a very large quantity of the patent still whiskey unblended drunk. You say in Ireland there is more of the self whiskey drunk than the blended?—No; I say there is proportionately more drunk in Ireland than is drunk in England and Scotland.

4756. Is there a considerable proportion of the unblended whiskey drunk in Ireland?—I think there is more than is drunk in England and Scotland.

4757. Then that unblended whiskey must be a greater proportion of patent still whiskey than the pot still whiskey?—I do not quite follow.

4758. Surely the greater proportion of unblended whiskey would be patent still whiskey, and not pot still whiskey?—I do not know that that quite follows. There may be a blend with a small proportion of pot still.

4759. You have such a small quantity of pot still whiskey produced, and if you blend it there is very little left to drink as unblended whiskey?—But we are not the only pot still distillers in Ireland and our patent still whiskey may be blended with other pot stills not made by us.

4760. But, taking it as an average, you are producing a far greater quantity of the patent still than the pot still?—Yes; but there are other pot stills which produce no patent still at all.

4761. Yours, you mean, or other people's?—Other people's.

4762. I am taking your figures, and as they stand you have given a very great majority to the patent still?—Yes.

4763. Some of that is blended?—Yes.

4764. Then, when you come to ask what is drunk, surely more of your whiskey would be drunk out of a patent still as self whiskey than out of a pot still?—Oh, yes; if it is not blended with other makers' whiskies.

4765. Unblended pot still and unblended patent still. Surely there is more unblended patent still than unblended pot still drunk because your gross production is so much greater?—Yes, my lord, of our own makes.

4766. Do you know what is the proportion of the two as regards Ireland as a whole? Is more patent still drunk?—In Ireland I think there is more patent still whiskey than pot still whiskey drunk. I estimate there is about twice as much patent still produced in Ireland as pot still. The total production of patent still whiskey is about double that of pot still whiskey in Ireland.

4767. Can you give me at all any estimate as to what proportion would be blended and what proportion would be drunk without blending?—No, my lord, I cannot.

4768. I think we have had it given in evidence that in Ireland there were 25 pot still distilleries and 9 patent still distilleries?—Yes, that is so.

4769. The patent stills are these: 1 at Cork, 3 at Dublin, 1 at Dundalk, 3 at Belfast, and 1 at Londonderry?—That is so.

4770. The pot stills only work a certain portion of the year?—As a rule, yes. There is no pot still in Ireland that works all the year. Some may work a little longer than others, but on the average they do not work more than six or eight or nine months in the year.

4771. What is the difference as between the Scotch and Irish systems as to the number of distillations?—In Ireland there are three distillations, whereas in Scotland there are only two. There is one more fractional distillation in Ireland than in Scotland.

4772. Does that go on now? Is the Irish distillation still three?—Yes, that is the practice now, but I think in former years that was not so. I think two distillations is all that was practised in Ireland in early times. I have an Excise entry here that was made by Ross T. Smyth, who was the predecessor of David Watt.

4773. Will you just refer to that entry? It is an old entry, I believe, of 1829?—Yes, "Entry made by Ross T. Smyth, the predecessor of David Watt and Co., Limited, Distillers, Londonderry." There are only two stills entered there, namely, "One still for distilling wash into low wines," and, "One still for distilling low wines and feints into spirits." This does not prove altogether that only two distillations were practised. They might perhaps have distilled twice in one still, but if you consider the state of the Excise laws that were then in force it becomes practically certain that only two distillations were practised. In these early years the duty was levied not on the spirit but on the still, and the distiller had practically a free hand to distil as quickly as he chose, and the quicker he distilled the less therefore the duty on the spirit. So that obviously it would be in his interests not to distil more than was absolutely necessary to produce a potable spirit.

4774. There are three distillations now in the pot system?—Yes.

4775. What is the advantage of the three distillations over the two?—You obtain a more highly rectified and purer spirit.

4776. That seems to be a great distinction between the pot still and the patent still—the difference between the three and the two distillations?—Yes, my lord, that is to say you get a purer distillate when you fractionate it three times than when you only fractionate it twice.

4777. In the items you gave us just now of the expenses, where does the greater expense, if at all, of the third distallation come in? Is it in the labour or the coal?—In the coal, principally.

4778. There is not much difference in the coal?—No, it is about one penny a gallon.

4779. Is there any difference in the size of the heads of the modern pot stills?—Yes, the heads of the modern pot stills are made much larger in size than was formerly the case so as to expose a large surface to the cooling influence of the atmosphere, and the result is that during distillation there is a partial condensation of the less volatile constituents of the spirit vapour. These flow back into the still.

4780. You mentioned something as to the use of charcoal and alkali and other chemicals. Are they used in any quantities?—Oh, yes.

4781. For what purpose?—For removing some of the constituents, the volatile bye-products. Oxidation takes place and neutralisation. Some of the volatile products are rendered non-volatile.

4782. Of course you have heard of the Coffey patent still?—Yes.

4783. When do you think it first came into use?—The still was patented, I understand, in the year 1831, and it has been suggested that it was many years after that before it was used for making whiskey. But I think I can show that that was not so. We have traced through the old records of our Londonderry distillery and I find that the predecessor of the present firm, that is Ross T. Smyth, erected a patent still at the Londonderry distillery in the year 1833.

4784. How do you show it to be a Coffey patent still?—I have here a copy of the letter addressed to the Commissioners of Excise dated August, 1833, in which Ross T. Smyth says: "Honourable Sirs,—Having erected one of Mr. Coffey's patent distilling apparatus I trust your honourable board will give such instructions to your officers in charge of my distillery as will enable me to get to work without delay." That is signed "Ross T. Smyth." Then there follows an entry of that still.

4785. What is the entry?—It is rather a long document, but the result is that there is entered there as part of the plant at this distillery in Londonderry the rectifier and analyser of a patent still—the still that was referred to in the letter I have just read.

4786. That shows it was erected?—Yes.

4787. This is Abbey Street, is it not?—Yes.

4788. As far as you know, was the pot still process discontinued at Abbey Street?—Yes, and that is shown by the fact that there is no excise entry after that date of any pot still at the Abbey Street distillery.

4789. What sort of production was there at Abbey Street at that time? Was it a small production?—Relatively.

4790. Is it now one of your biggest or smallest?—It is one of our largest, and one of the largest in Ireland.

4791. And in Abbey Street you have used the patent still process ever since?—Yes, ever since 1833 we have used the patent still process, and it has been regularly and continuously in use.

4792. Since that time, of course, this Abbey Street distillery has been at work producing?—Yes, for the past 75 years.

4793. What name as far as you know has been applied to the production from the Abbey Street distillery under the patent still process?—Even back in the year 1834 I find that it was called whiskey; sometimes it was called grain whiskey, sometimes patent still grain whiskey or patent still whiskey, but it was undoubtedly known even in those days as whiskey.

4794. Where do you obtain that knowledge from—speaking generally first?—From old documents, invoices to customers, and letters to customers.

4795. Would you produce one of the earliest where it is designated whiskey?—Here is one in the year 1834. This is a letter addressed to Messrs. Twiss and Browning, of Mark Lane, London: "We are in receipt of your esteemed favour of the 14th instant. When the writer returned from London we had unfortunately dried and ground all the grain we used this season, which deprived us of the power of giving a peat flavour to a few puncheons of our patent still whiskey. As we have now stopped working till next September we could not send you any till after that period. We shall, however, be glad to send you some of our patent raw grain" and so on.

4796. The patent raw grain would be the whiskey?—Yes, the term "whiskey" you will notice was used earlier in the letter.

4797. What is the date of the month of that letter?—19th May, 1834. There are quite a number of letters here. Sometimes it is called "spirit." Here is one where the term "rye malt spirit" is used. Here is another where it is called "grain whiskey." Here is another where it is called "malt whiskey" and "smoked malt spirit."

4798. (*Dr. Horace T. Brown.*) Does that refer to the patent still?—Yes, it is all patent still.

4799. (*Chairman.*) Can you without difficulty summarise the number of letters you have in your possession giving the different designations of whiskey—patent whiskey or patent spirit, and so on? Would it give you much trouble to extract the different names?—I think I have them here roughly. There is patent raw grain whiskey, patent malt whiskey, patent malt spirits, patent Innishowen malt whiskey. I find Innishowen is a term synonymous with potheen, the illicit spirit which was prevalent in the Innishowen district lying between the Foyle and the Swilly, which was a great smuggling district in those days.

4800. I want to know which is the general term applied, if you can give us the number of times the different terms are employed in those letters?—I could not do that without going into it.

4801. Can you do it without much trouble?—Yes, I think so. We have a great number of letters other than those I have here. I have only a few letters here, and I can send you a great many more.

4802. As far as you know, did the introduction of the Coffey patent still process produce somewhat of a change in the production—I am speaking now as regards blending? At the time before the Coffey patent still came into use was there much blending of whiskey in Ireland?—I should think not.

4803. Then what caused the blending to come into play?—I cannot tell you when blending commenced.

4804. Was it a blend of the two, the pot still and the patent still?—I presume it was. The pot still at that time was very crude, and very little of it was bonded until it was matured; hence patent was probably blended with it to make it more potable.

4805. What different classes of pot still whiskey are blended, or is the blending jointly between pot and patent still?—The pot still whiskies are sometimes blended by themselves without the patent still.

4806. Would that be different productions from different distilleries?—The products of different pot still distilleries may be blended together.

4807. So whenever you get different characters of whiskey you get the blend, whether it comes from one system or the other?—That is so.

4808. When, as far as you know, did the system of bonding come into existence to any large extent?—At the time the patent still first came into use there was comparatively very little bonding. The production seems to have been very large in proportion to the amount of bonding that was done at that time. I have looked up some of the old records, and they seem to bear out the fact that in the early years of the nineteenth century there was comparatively very little maturing done.

4809. There is considerable bonding now?—Undoubtedly.

4810. Is that to meet the public taste and get the spirit older?—Yes, to get it older and of milder flavour. Indeed, I rather think the patent still has been responsible for that, because it has compelled the pot still distillers to bond until the whiskey gets milder.

4811. We gather that the maturing is much more important to the pot still system than to the patent still system?—It is more important.

4812. In consequence of the great strength and great flavour, which wants more maturing?—It is cruder to begin with.

4813. What should you say as to the advantage to be derived from compulsory bonding—that is, compulsory age?—I think it is altogether a question of the public health. If the public health requires that whiskey be kept in bond until it matures, then undoubtedly the distillers ought to be compelled to keep it, but I do not think it has ever been clearly proved that that is the case, and if it were, I think that each class of spirit ought to be dealt with according to its merits—that is to say, because one class of spirit requires three, four, or five years to mature it, that is no reason why another spirit which does not require it should be compelled to be kept in bond for that time.

4814. From the opinion you have formed, and from what you have heard from others, and what you hear in consequence of the demand made upon your distilleries, do you think that, apart from the question of taste, there is any great effect in consequence of the young spirit being consumed by a consumer? What is the difference, apart from that question of taste, between the new spirit and the old?—I do not know of any, but that is, I think, more a question for a medical man.

4815. Have you heard persons in the trade complain and say they cannot sell whiskey under two years or three years old? Generally in the trade is it thought that new spirit is injurious?—I do not think so as regards the trade, but there is no doubt the public have that idea.

4816. I am not speaking of the taste, but I am asking you whether it would be injurious to the health of the consumer?—I do not know, but I do not myself think it would be injurious.

4817. What do you think as to the length of time before whiskies should be put on the general consumers' market?—Before they are fit for consumption, you mean?

4818. I am taking you away from that, because you say you cannot tell, and I am asking you with regard to them being put on the market for the consumers. How long should you say they ought to be kept?—In the case of pot still whiskey there is very little put on the market under three years old, and that is even considered young enough. In the case of patent still whiskey there is a good deal of it which goes into consumption before it is many months old, but it is of all ages—between two and three up to ten years old. It is generally considered that a patent still whiskey with one or two years age is quite as well matured as a pot still whiskey of four or five years.

4819. That is in consequence of the different constitution of the two spirits?—Yes.

4820. If your old whiskey is kept for three or four years where, as a rule, is it kept—at the distillery or in bond or where?—In bond.

4821. What is the advantage of that? Is it put in bond in order to obtain proof that it has been kept so long?—No, it is in order to mature it.

4822. But you can mature it if you keep it in other ways?—The duty does not require to be paid when it is bonded.

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4823. But supposing you keep it at your distillery, supposing you had a room which you called the bond room at the distillery, would you have to pay duty then?—No, my lord, the bonds are very frequently—indeed, almost always—at the distillery, but they are under Excise supervision.

4824. You do not care about the building belonging to the Government more than belonging to the distillery; but it is simply that it has to be kept, as proof that it has been kept?—Yes.

4825. Can you suggest any practical way how the public can be assured that it has been kept if it is only kept in the distillery, and not kept in a Government bonded warehouse?—It does not really matter whether it is at the distillery or at a Government bonded warehouse. They are equally under the control of the Government.

4826. Is that so?—Yes.

4827. Until duty is paid it is under the control of the Excise officers?—Yes, my lord.

4828. I suppose, as a rule, the distiller prefers not to pay the duty rather than paying it. You keep the duty unpaid?—Yes; until it goes into consumption the duty is practically never paid.

4829. What is your view, as representing the trade? Would you object to a compulsory period before which the whiskey should not be sold?—I do not think we should be asked to keep whiskey in bond compulsorily unless it is clearly established that the public health requires it. That is the position we take up.

4830. That is a very fair answer. Apart from health, you know no reason why it should be kept in bond?—No; none.

4831. It is a commercial transaction between the manufacturer and the seller, whether he likes old whiskey or not?—That is exactly the case.

4832. I presume your view is that, as regards the trade, that should be left to rule itself and govern itself?—Yes.

4833. As regards health, you very properly say you must leave that to others to determine, and, if necessary, you are willing?—Quite willing.

4834. You have been anxious to establish that the patent still product is not at all novel?—It is not novel at all.

4835. And it has been gradual since the time of the patent still?—Yes.

4836. I will not go through the proof of your evidence on that, because I do not think it is very much disputed. Now, I want a little more from you as regards the ingredients. Is the Irish whiskey regarded as being a more highly flavoured whiskey than the Scotch, or not? Which is regarded as being the more highly flavoured whiskey, the Scotch or the Irish?—The Scotch has got the high peated flavour, and there is no peat flavour in the Irish whiskey. That is really the distinction between the two, broadly speaking.

4837. I always understood so. The difference between the peat and the coal is the great cause of the difference in flavour?—It is.

4838. There are some distilleries in Ireland—three, I think—where they are using an all-malt mash?—Yes, three.

4839. Which are those?—Two in Coleraine and one in Bushmills, all in the North of Ireland.

4840. Does that fact cause an approximation to the Scotch plain malt whiskey?—Yes; the whiskey that is produced in the distilleries referred to—one of them particularly—is very like Scotch whiskey, very like some of the Lowland malt whiskies.

4841. Will you give me the general composition of the mash that is used in Ireland for the manufacture of the patent still whiskey?—Roughly speaking, it is about one-third of malted barley, one-third of maize, and one-third of rye. These vary slightly in proportions, but that is approximately correct.

4842. A third of each, malted barley, maize and rye?—Yes, my lord.

4843. In Cork I believe there is one distillery where no maize is used?—Yes, they use no maize. The mash there is practically the same mash as is generally used in Ireland for making pot still whiskey—malted barley, unmalted barley and a small quantity of rye and oats.

4844. Apart from this Cork distillery is the proportion you have given us of the thirds what you believe to be used for the patent still whiskey throughout Ireland?—That is approximately correct.

4845. Has that proportion been in use for some years?—Yes, we have used it for a good many years.

4846. What should you say was the name generally applied to the whiskey manufactured under the conditions of those proportions?—The name that is generally applied?

4847. What is the name under which the product is produced and sold? What has it been called?—It varies. It is either "Whiskey" or "Grain whiskey," or "Grain spirit."

4848. Is it generally called "whiskey" or not?—It has really in the trade, if you take the trade first, always been recognised as "whiskey," although the term "spirit" has been used in connection with it. "Grain spirit" is quite a common term, but "grain whiskey" is also used.

4849. I can understand it being called "grain spirit" when the distillery is selling it to the licensed victualler or the retail seller, but if that production is produced in the public houses in Belfast or Londonderry what would the consumer call it?—"Whiskey." I do not say he would know anything about it; I do not believe he does know anything about it any more than about pot still, but it certainly is always considered as "whiskey."

4850. Would the consumer, an ordinary person who represents the public, ever go into a public-house and say, "Give me a glass of grain spirit"?—No, my lord.

4851. Do you think the same public, the consumer, knows anything about making a differentiation between pot still and patent still?—I do not think so. I do not think he knows, and I do not think he cares really. He does not concern himself about it.

4852. Would the publican selling to this consumer keep the two classes, the pot still and the patent still, and give one a glass of one and another a glass of the other, according to the demand made upon him? Would that be at all a common practice?—It is not very common, but in Londonderry for many years there has been a large trade done in grain whiskey. I do not know whether the public knows it is made in the patent still or not, but they know it is a different class of whiskey from the pot still whiskey, and there is a very large trade done in that in Londonderry.

4853. What do you mean by "in that"?—In that class of spirit.

4854. Both patent still and pot still?—Yes, both patent still and pot still.

4855. Do you think there that the discrimination prevails so that an ordinary consumer would say, "I want a glass of pot spirit," or "I want a glass of patent spirit"?—I do not think he would go the length of that, but he would certainly ask for grain whiskey. They do that largely in the North-West.

4856. If a man asks for grain whiskey what would he mean?—In that particular district he knows it is that particular class of whiskey which he likes.

4857. And which Abbey-street has manufactured?—Yes, my lord.

4858. But that, I suppose, depends upon the production, like in Scotland, where there are particular districts. You say particular distilleries have a particular class of whiskey?—Yes.

4859. That you say refers to Londonderry?—Yes, it does.

4860. There is another point I want to ask you about. It was, I think, in the early sixties that maize appeared as a constituent of the mash in the patent still?—Yes, that is the earliest record I can find of it. It may have been used earlier, but I cannot find any authentic record to that effect.

4861. You have a record with regard to the malting of maize by Watt and Co.?—Yes, David Watt and Co. memorialised the Board of Inland Revenue for permission to malt maize in 1863, and that was granted.

4862. You do not know, I suppose, whether unmalted maize had been used before that date?—I have no definite proof of that. It is very likely I should

think before they began to malt it that they used it unmalted.

4863. You have this proof that in the fifties before this date of 1863 that you have given me, that Watt and Co. were purchasing maize?—Yes.

4864. For use in the mash?—That is only presumption.

4865. What were they purchasing it for?—They might have been grinding it to sell as meal. They did conduct more or less a milling business, but I can find no records of Indian meal or maize meal being sold, although there are plenty of invoices of wheaten flour. That is just where the doubt comes in that although they bought maize they might have been using it for grinding into meal. That is why I do not like to say definitely that they were using it at that time for making whiskey.

4866. Was not the collection of fusel oil taking place?—Yes, fusel oil was collected in 1858.

4867. Where did that come from?—Off the patent still.

4868. What produced that? Was that not maize?—I do not know that it proves that necessarily. It was contended in the whiskey case that no commercial fusel oil was produced when the ordinary pot still mash is used. I do not think that is really the case, but if it is correct then we must have been using maize in 1858, for there was commercial fusel oil produced at Abbey Street Distillery in that year. I have a copy of a letter in which permission was asked from the Excise Department to remove a cask of fusel oil from the distillery in that year.

4869. (*Mr. Guillemard.*) But that conclusion of yours follows from a premise you do not admit?—If it is correct, then my conclusion follows.

4870. (*Chairman.*) You have given me already the proportions in the patent still of the three-thirds, and I will not go through them again, but you have a record of the different cereals to be used in your different distilleries?—Yes.

4871. Barley, rye, maize, oats and occasionally wheat?—Yes.

4872. I believe nothing but grain is used in your distilleries?—There is nothing used in our distilleries but grain.

4873. I am going to ask you to undertake a duty that is sometimes a very rash one, that is, to give a definition. How do you define "whiskey"?—I think it ought to be taken pretty broadly. I think it is a spirit which is made from cereals, and saccharified by malt. That is a broad definition, but I do not see that you can bring it within very much closer limits.

4874. Any cereal?—Any cereal.

4875. Grown in any country?—Grown in any country.

4876. We have a little anxiety on the subject of rice. Does that come into your cereals?—Yes. I do not see why rice should not be allowed to be used. I think it would practically settle itself, that is to say, the spirit produced from rice is what is called "hard." I do not think distillers of patent still whiskey would use it.

4877. I will not press you more on the subject of the definition, but I will ask you a little more about the flavours. Does the water according to your view affect the flavour of the whiskey?—Yes, I think there is no doubt about that.

4878. You think some of the districts that have got a reputation both in Ireland and Scotland have been helped by the water in the district?—I do.

4879. Has the pot still distiller a greater opportunity of dealing with the flavours than the patent still distiller?—Yes, he has.

4880. For what reason?—The amount of flavours which come over in the spirit produced in the pot still is greater, and if you vary the grain you get a more pronounced difference in the case of the pot still than you get in the patent still.

4881. I think the result is that the pot still whiskey has a greater flavour than the patent still whiskey?—That is so.

4882. You can vary that flavour by altering the materials, I suppose?—You can.

4883. And I suppose the result of all this is that an expert, a person who has studied the question, could tell by the flavours the difference between the two whiskies, the pot and the patent?—Oh yes.

4884. And I suppose also, apart from the difference in the two systems of manufacture, a person who is skilled can tell whether there is 25 per cent. of malt used, or whether there is 40 per cent. of malt used, and the rest made up of maize?—Yes.

4885. Whether it is made in a patent still, or a pot still, if you take a pot still whiskey an expert can tell you whether there was a difference of 25 per cent. or 30 per cent. in the amount of malt used in the one case and maize in the other?—He might not be able to tell you the cause of the difference. He would know there was a difference, but he might not be able to trace it to any particular thing.

4886. A person tasting it would know there was a difference in the taste?—Yes.

4887. I suppose the result is this, that at the Cork distillery where no maize is used it would have a different flavour to the whiskey produced at a distillery where maize is used?—Yes, the patent still whiskey made at Cork has quite a different flavour to any other patent whiskey made in Ireland. It is quite easily distinguished.

4888–9. Take the ordinary well-manufactured patent whiskey and the production of it. Supposing that was given to an ordinary consumer, do you think any ordinary consumer would say "This is not whiskey"?—It would depend a great deal on what he had been accustomed to drink. If he was accustomed to drink a highly-flavoured pot still whiskey and was given a patent still whiskey I would not go the length of saying he would say: "This is not whiskey," but he would think it was a totally different kind of whiskey, and he could not help remarking that it was different.

4890. You have got Londonderry still in your mind now, have you not, where they do drink the pot still whiskey?—It is not so much the pot still whiskey in Londonderry; it is very largely patent still.

4891. Belfast?—I do not think there either particularly.

4892. Take Dublin or Cork. If an ordinary patent still whiskey, manufactured according to the ingredients you have mentioned in thirds, was produced to an ordinary customer, according to you he would not be likely to say, "This is not whiskey at all—it is spirit"?—I do not think he would say "It is not whiskey."

4893. Does it pass all through Ireland under the name of whiskey?—Yes. He might say he did not like that whiskey, or he did like that whiskey, but he would not say it was not whiskey, even though he did not like it.

4894. We have obtained from you the total relative production of pot still and patent still, but according to your production a great many persons must take the patent still spirit both blended and unblended?—Yes, there is no doubt of that at all—both blended and unblended.

4895. This product is known also as "Self whiskey" in Belfast, is it not?—Yes—you refer to the patent still whiskey?

4896. Yes. What should you yourself, reading an advertisement in Belfast, regard that as meaning?—I do not quite follow.

4897. You are aware that evidence has been given that in Belfast whiskey has been sold which is advertised as "Self whiskey." If you have not had your attention called to it say so, but I understood from your evidence that you had had your attention called to it?—It is referred to as "old patent still whiskey"

4898. You say in your *précis*: "I also know that in Belfast the product of the patent still is advertised and sold as a 'self whiskey'"?—What I mean by that is that it is sold as unblended.

4899. Does "Self whiskey" mean that it is unblended?—Yes.

4900. Might it be patent still, or might it be pot still?—Exactly—patent still or pot still. A "self whiskey" is understood to be a whiskey that is an unblended whiskey.

4901. (*Mr. Guillemard.*) On that same point when you say it is unblended do you mean that a "self whiskey" must be the product of one particular

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distillation? Can a self spirit be a mixture of two pot still spirits made by the same distiller, or is it confined to one? Supposing a distiller is making two or three pot still products of rather different strength and character, may he mix two of those, and would that be a "self whiskey" or not?—Strictly speaking, I think it would not, but if made in the same distillery it might.

4902. It would not be strictly that, but it would be called that ?—Yes; it might be.

4903. I should like to ask you a few questions about the suggestion of compulsory bonding. I take it that you say that unless public health can be shown to demand it you think there is no case?—I think not.

4904. If the public health is shown to demand it, and it is decided that there shall be some system of compulsory bonding, you attach great importance, do not you, to this point, that it will be necessary, if you are going to make the system fair as between man and man and spirit and spirit, to have a different period of bonding for the different classes of spirit?—Undoubtedly. I do not see how you can very well ask that a spirit should be kept in bond for, say, five years which only requires one or two years to be thoroughly matured.

4905. Quite so. Then it would be necessary, on your principle, to fix a different bonding period for pure pot still whiskey, for pure patent still whiskey, and for blends?—That is so.

4906. That would be only possible, would it not, if there was an accepted definition of each of those three varieties of whiskey?—Exactly. And further, there are many varieties of pot still whiskey, and there are practically no two pot still whiskies that mature in the same time, so if you were to arbitrarily fix a definite period for pot still whiskey you might be doing some pot still distillers very great hardship.

4907. That is not exactly my point. My point is this, that if on your principle it is desired to fix a different period of compulsory bonding for the pot still whiskey on the one side, and of patent still whiskey on the other, it is clear that somebody must be able to point to an authoritative definition of pot still whiskey and patent still whiskey?—That is so.

4908. As the Chairman points out, it would be not only that you would have to have a definition, but that it must be a definition that would be capable of proof in the case of a particular spirit?—Yes, what is pot still and what is patent still would arise at once.

4909. Then the general line you take with regard to compulsory bonding, I take it, is in accordance with the views of the majority of the trade witnesses who came before the Select Committee of 1890 and 1891?—Yes.

4910. You have not altered your position?—No, we have not altered it.

4911. I have been a little puzzled at the sittings of this Commission to find that whereas all the trade witnesses objected to compulsory bonding in 1890 and 1891, yet there is a tendency for some trade witnesses now either to say that they are in favour of compulsory bonding, or perhaps to hedge a little about it, and say they do not think it will do any particular harm. That is a distinct change of attitude, and at present I am in the dark as to what is at the bottom of it. Have you any explanation to offer? You may not know because it is rather asking you to explain other people's views?—I gather that practically there are two reasons. One of them is that distillers see that the public, rightly or wrongly, consider old whiskey better than new whiskey, and they think it would be as well to let them have it.

4912. That is one reason?—Yes.

4913. Am I right in thinking that they can take that view pretty comfortably, because if they keep it a year, or two years, or three years, they can not only ask, but get, a higher price for it?—Yes, but the public would have more confidence if bonding were compulsory. Some members of the trade think the public would have more confidence if they knew that no spirit could go out of bond until it was matured. That is one reason. Then the second reason I think is this, that when the Select Committee sat in 1890 and 1891 the trade generally had not the necessary stocks of whiskies, and they had not the necessary warehouses.

4914. They made a great point that providing the necessary warehouses would be a great hardship?—Yes. Now many of them at any rate have the necessary warehouses, because in the years 1897, 1898 and 1899 there was really far too much whiskey produced; there was a boom, and there was too much produced then; there was serious over production, and warehouses had then to be provided.

4915. You are speaking of Scotland?—Scotland principally. They had to build warehouses then. They got the stocks up and they have never really gone down since, so that they are in a sense prepared.

4916. You think that even at this moment in Scotland they are holding stocks that represent the same state of things as if compulsory bonding had been in force for two or three years?—I think in Scotland that is pretty nearly the state of affairs.

4917. According to your view, when they are ready to agree to a change no change is really involved as far as they are concerned?—No. They have the stocks and they have the warehouses. That is not in every case, but generally speaking.

4918. Now come to Ireland. Is the state of things different in Ireland?—Yes, it is undoubtedly, as far as patent still distilleries are concerned anyhow.

4919. There is not a redundancy of stocks?—No, there is not.

4920. You feel pretty sure about that as regards patent still whiskey?—Yes.

4921. You are possibly not so sure about pot still?—I am not so sure about pot still. I think probably they have stock enough of pot still.

4922. The reason I ask is that I think I am right in saying that some of the witnesses from Ireland who represented the pot still distillers had no objection to a compulsory bonding?—That is so. They must keep their pot still whiskey in bond. It is not fit for consumption when new. Until it gets a good many years old it is not potable.

4923. There is only one more point I need put to you. Do you think the attitude you have taken up to-day will be the attitude of the producers of the patent still whiskey in Ireland, looked at broadly as a whole trade?—Yes, I think that is the case.

4924. You told us with regard to the amounts that there was about twice as much patent still spirit produced in Ireland as pot still in a year?—Yes. Of course, that is an estimate. I do not think it is very far out.

4925. Have you any idea of what relative proportions are drunk in Ireland of those two products?—I have no means of knowing that.

4926. To put it the other way, you do not know how much is sent out of Ireland for blending in England?—No, I could not tell.

4927. Do you send any out to England to be blended?—We do so, but it mostly goes through the blending houses in Belfast.

4928. You blend it yourselves and send over the product?—No, we do not blend it ourselves; we sell it to the Irish blenders, who blend it, and send it over to England and Scotland.

4929. Then you do not know how much is sent out of Ireland as patent still spirit unblended?—No, I have no means of knowing.

4930. There is one point I think you refer to in your *précis* of evidence. When a distiller supplies whiskey of his own to a blender who blends in bond what is the general practice? Does the cask go with the distiller's name on it?—Yes.

4931. (*Mr. J. Y. Buchanan.*) You say that your firm began to make patent still spirit in the year 1833?—Yes, the still was erected in 1833, and it commenced to work in 1834. That was when it first began to produce.

4932. And thereafter you went on and have been making patent still whiskey ever since?—Yes, for 75 years.

4933. Of course, the patent still spirit was a perfect novelty at that time in Ireland?—I find, according to some old letters that I have come across, and which I produce, that even in 1833, there were other patent stills at work in Ireland. There was at least one if not two in Cork; there was one in Dublin certainly in 1838, and one in Dundalk at

least 60 years ago, so that it was not merely confined to the North of Ireland, but it was all over Ireland, you may say, north and south.

4934. But when it came on it must, of course, have struck the people as a complete novelty in drink?—Yes, and I should think, having regard to the nature of the pot still whiskey produced then, that a mild-flavoured patent still whiskey must have struck them as being rather nice.

4935. It met the public wish at the time?—Yes, I should think so. I think that is the natural inference to draw.

4936. The pot still whiskey was a very raw product at that time?—Yes, it was so. There was practically no bonding done at that time. It was new or almost new when consumed.

4937. So at that time I suppose the patent still whiskey was at first sold really as a self whiskey?—Yes, I should think that at first it was all self whiskey.

4938. And the sellers of whiskey would hardly at first think of blending it with the then pot still whiskey?—No, I should think that would come on later.

4939. Might it not be that the pot still whiskey producers began then to alter their practice in order to make something more palatable?—I think it is very likely that the patent still not only, as I mentioned before, was the cause of the pot still distillers keeping their whiskey in bond until it matured, but also probably it led to the third distillation being practised in Ireland in order to produce a whiskey that would be more palatable when it was young and new.

4940. Then it is pretty certain at the beginning when the patent still whiskey was produced, that in Ireland there was a considerable sale of patent still whiskey as a self whiskey without blending?—Of course, I have no definite proof as to how it was sold to the public. I know it was sold as such to the publicans and to the trade generally, but that is all I can say about it at that time.

4941. The Cork patent still distillery, you tell us, has quite a special flavour. Is that mostly sold as a self whiskey to your knowledge?—No, I cannot tell you. I do not know much about how it is sold.

4942. But as a matter of fact, in Ireland there is, I suppose, from the figures that you have given us, much more patent still whiskey drunk than pot still?—I should say so.

4943. We are told there are eight million gallons produced of the one and four million gallons of the other?—Yes.

4944. Is it probable that the patent still whiskey is now exported to double the extent of the other?—I have really no means of knowing that.

4945. You cannot form an opinion whether the patent still whiskey is principally drunk in Ireland or not?—No, I should not like to say.

4946. (*Dr. Horace T. Brown.*) I gather from some of your replies that you are not only a practical distiller but that you have also knowledge of the scientific principles underlying your practice?—I have a little general knowledge. I have not had much to do with the practical work lately.

4947. Do you know what the chemist means by fractional distillation?—Yes.

4948. In your opinion is the pot still an apparatus which produces a fractional distillation?—I think there can be no doubt about that. It is a fractionating process.

4949. You regard that as beyond all doubt?—I do not think anybody who knows even the rudiments of the chemistry of distilling can doubt that.

4950. You would not consider that the whole of the volatile impurities that are produced through fermentation come over from the wash into the finished product?—I am quite satisfied they do not.

4951. So you regard both the pot still and the patent still as producing fractionation?—That is so.

4952. But, I suppose, in a different degree?—Yes; the patent still is undoubtedly more powerful as a rectifying apparatus.

4953. You mentioned in your evidence that charcoal and alkalis are sometimes used in the pot still. Is that frequently the case?—I think practically all Irish pot still distilleries use at least charcoal, and some of them very largely.

4954. Is that in order to prevent the still from running foul?—It is really with the idea of oxidising some of the bye-products.

4955. The influence of the alkali would be, would it not, to decompose some of the esters—the compound ethers?—Yes.

4956. Is soap used to any extent in the pot still?—Yes, it is used by some distillers.

4957. Merely, I suppose, to prevent frothing?—That is so.

4958. Do you think it has any effect beyond that?—There would be decomposition of the acids in the wash by the soap.

4959. It would have an effect similar to that of an alkali?—Yes, it would have, more or less.

4960. I have been looking over your statement, on page 14 of your *précis*, with regard to the cost of the materials in pot still and patent still whiskies respectively. You have amplified those particulars in the statement you have handed in?—Yes.

4961. I suppose the particulars at the head of this paper refer to those in your *précis*?—Yes, they do.

4962. Could you tell us what is about the average yield of proof spirit per cwt. from the materials you use?—About 5½ or 5¾ gallons.

4963. That is the figure we had the other day?—Yes.

4964. You think it averages that?—Pretty nearly.

4965. Do you think your maize would give you a higher yield than malt alone?—Rather higher. I suggest rather more if you take steps to thoroughly gelatinise it.

4966. Did you ever see anything as high as seven proof gallons per cwt. of maize?—No; we do not get anything like that. It might be possible under certain conditions.

4967. I see in these particulars which you have handed in that you put the price of your own barley malt at 7s. 2d. per cwt. That is only equal to 21s. 6d. per quarter of 336 lbs.?—But I think you will notice that that is not the price of the malt; that is the price of the barley from which the malt was made with in-leak added; it is the price of the original grain.

4968. It is put in as barley malt?—But there is the in-leak taken into account.

4969. What is that?—The loss during malting; there is so much barley used to make the malt, and the price refers to the original barley, not to the malt.

4970. But the finished malt will cost you more than 7s. 2d., will it not?—Yes, certainly. That is the price of the barley from which the malt is produced.

4971. I do not quite understand that. You start with your grain at 448 lbs. How much malt did you start with here. What does that represent in actual hundredweights of malt?—There were 192 cwts. of home barley malt used; adding on 25 per cent. for in-leak or loss during malting we obtain 240 cwts., which represents the barley required to produce 192 cwts. of malt. 240 cwts. at 7s. 2d. equals £86—the amount charged against the malt. The labour and coal required for malting are included in the labour and fuel account of the distillery.

4972. You refer to the bye-products at page 16 of your *précis*. Do you mean by that the grains, and so forth?—Yes.

4973. Do you make yeast in Ireland?—Yes, we make yeast; that is one of the bye-products referred to.

4974. That is not taken into consideration in the cost?—No, none of the bye-products are taken into consideration, neither in the pot still nor in the patent.

4975. That reduces the cost of the material in your patent still?—Undoubtedly, and that is one of the reasons why patent still whiskey can be made cheaper than pot still.

4976. I do not think we have had that in evidence?—I gave that as one of the reasons in my *précis*.

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4977. Do you mention specially yeast?—I say "The bye-products of the industry are more fully utilised."

4978. Can you give us any idea how much the spirit would be reduced in price by the utilisation of the yeast for bakers' purposes?—I really would rather not answer that question.

4979. But it does make a considerable difference?—Oh, it does. There is no doubt at all about it.

4980. (*Dr. Cushny.*) Do you know if fusel oil has ever been got from the pot still? Is it ever separated?—Not in quantity. You may get a minute quantity, but it is never got in a commercial quantity.

4981. Where is it got from when it is got in a minute quantity?—From the patent still.

4982. But when it is got from the pot still—is it ever separated?—No, it practically is never separated. It really passes away partly in the spent wash and partly in the spent lees.

4983. (*Chairman.*) We are very much obliged to you, Mr. Virtue, for the evidence you have given.

The witness withdrew.

Mr. W. H. Ross.

Mr. William H. Ross, called.

4984. (*Mr. J. Y. Buchanan.*) Are you the managing director of The Distillers Company, Limited, Edinburgh?—I am.

4985. You have held that position for eight years?—Yes.

4986. Previously you were general manager and secretary of the same company?—Yes.

4987. The company was formed in 1877 by the fusion of six of the largest patent grain distilleries in Scotland?—Yes.

4988. And from time to time there have been included in the same company various distilleries, until at the present date, I think, you have altogether twelve distilleries in Scotland, one in Ireland, and the latest acquisition is the Vauxhall Distillery at Liverpool?—Yes, that has only recently been acquired.

4989. Is that the only one in England?—Besides a gin distillery in London. It is the only whiskey distillery.

4990. Are the distilleries belonging to the Distillers Company practically all patent still distilleries?—No, there are various classes. We have six entirely patent still distilleries, of which only five are working at the present; six contain both patent and pot stills, of which only five are now working; and two are purely pot still distilleries of which only one is in operation.

4991. Are these mostly in the Lowlands of Scotland?—The Scotch distilleries are entirely in the Lowlands.

4992. Have you any Highland pot still distilleries?—No, with the exception of one pot still in the Highlands, near Keith, in Banffshire.

4993. You have been responsible for the buying of all the grain used in the distilleries?—I have for the last 18 years.

4994. Can you give us an account of the grain that is principally used in your distilleries?—We use barley, maize, rye and oats. The barley will represent about 30 per cent. of the whole, and is nearly all malted, while part of the rye is also malted. We use no diseased grain, roots or molasses, and these articles have never been bought by me during the last 18 years that I have had charge of the grain buying, but in respect of the Vauxhall Distillery at Liverpool, which we have only recently acquired, they buy molasses for the purpose of producing industrial spirit.

4995. Is the barley principally local or is it foreign?—Mostly all foreign for our patent still distilleries. We use local barley for the Highland distillery. I may say I have brought samples with me here of the various qualities of the grain we use. I thought it might interest the Commission, although I hope we may have some members of the Commission visiting our distilleries when they will see the grain on the spot, but I thought it might interest the members of the Commission to see the qualities of the grain we do use. These samples have been taken from recent purchases and recent arrivals of cargoes. The first I have here is a sample of Danube barley out of a ship that arrived in February. I have also a sample here of the malt made from the same barley. (*The witness produced a number of samples.*)

4996. (*Chairman.*) What is the result of the knowledge you wish to convey to the Commission by looking at these samples?—Only to see that it is thoroughly sound grain.

4997. (*Mr. J. Y. Buchanan.*) What proportion of maize do you use?—Taking the whole of our patent still distilleries for the past year, 1907, I find we use 46 per cent. of maize. We use 32 per cent. of grain malted, and 21 per cent. of rye, and 1 per cent. of oats. We use different proportions at different distilleries, but that is the average for the whole distilleries of the year.

4998. What is the price you pay for these generally?—That also varies, but at the present time we are paying for barley about 28s. per quarter of 448 lbs., which is equal to 7s. per cwt.; maize about 25s. 9d. per quarter of 480 lbs., which is equal to 6s. per cwt.; rye about 35s. per quarter of 480 lbs., which is equal to 8s. 2d. per cwt.; oats about 19s. per quarter of 336 lbs., which is equal to 6s. 4d. per cwt. These prices are ex ship at the port of discharge.

4999. Is it your opinion that in the patent still it is necessary to use quite as high a class of barley as for pot stills?—Quite.

5000. Would not the method of production in the patent still, where steam is used, make it possible to use a slightly inferior barley without producing any perceptible taint to the whiskey?—No. I think any damaged grain would show itself in the finished product with the patent still just as it would do in the pot still, although probably not to the same extent.

5001. What proportion of foreign barley is used in the different distilleries?—You mean in the patent still distilleries?

5002. Yes?—We use entirely foreign barley.

5003. And do you do that not on account of its cheapness, but because it is of better quality?—It suits our purpose, and is really in some respects better than the home-grown barley.

5004. Would you tell us something about the production of spirits in Scotland during the past three years?—For the three years ending 31st March, 1905, 1906, and 1907, the total production of spirits in Scotland was for the year 1905, 25,185,235 proof gallons; 1906, 23,812,839 proof gallons; 1907, 24,839,870 proof gallons, or an average of 24,612,648 proof gallons per annum. Of the above quantities there was produced by means of the patent stills in Scotland in 1905 13,013,895 proof gallons; 1906, 12,269,459 proof gallons; 1907, 13,801,092 proof gallons, or an average of 13,028,148 proof gallons per annum. So that of the total production of spirits made in Scotland more than half is now made by the patent still.

5005. In that connection we had from Mr. Virtue the statement that in Ireland there are 8,000,000 gallons of patent still whiskey to 4,000,000 of pot still whiskey. So that in Ireland there is twice as much patent still whiskey made as pot still whiskey, whereas from your figures here it would appear that the quantities of patent still whiskey and pot still whiskey are equal in Scotland?—Yes, nearly so.

5006. I had always been led to believe that in Ireland pot still whiskey was by far the greater amount?—That is not so.

5007. It appears that Ireland is relatively a greater patent still producing country than Scotland is?—Yes, there are a very large number of pot still distilleries in Scotland, about 130, or some such number as that, of pot stills, to 10 or 11 of patent stills.

5008. Are the pot stills in Scotland larger than those in Ireland?—No, they are smaller.

5009. But they are greater in number?—They are greater in number.

5010. How does the production in Scotland compare with the total production of spirits in the United

Kingdom?—I have made a careful computation of the various grades of patent still and pot still whiskies made in the three kingdoms during the year ending the 31st March, 1907, and I make out that in England practically the whole amount is from the patent still. There may be a small quantity made in pot still in Bristol, I think, but practically it is of little importance, and I have taken the whole as being made from the patent still. There are 13,424,854 gallons. In Scotland the proportions are for patent still 13,801,092, for pot still 11,038,778 for the 31st March, 1907. In Ireland I have put it at rather less than what Mr. Virtue puts it. Probably his figure is more correct than mine, but I assumed in making my calculation that there were 7,500,000 gallons made in the patent stills in Ireland to 4,553,184 of pot still. I take it approximately at 7,500,000 gallons of patent still, and I take the balance as pot still.

5011. (*Chairman.*) Have you any comparison for the back years?—No, my lord. This is really a matter that we can only get from private sources.

5012. (*Mr. J. Y. Buchanan.*) Will you now proceed with your figures?—In the year 1890, when the Select Committee reported at that time, out of the total make of 40,900,000 gallons we had stated in that Report 25,000,000 were produced by the patent still process and 16,000,000 with the pot still process.

5013. (*Chairman.*) That is in the United Kingdom?—Yes. So since that time there has been, roughly, an increase of 9,500,000 gallons, all of which is patent still. The pot still manufacture has remained absolutely the same as it was in those days.

5014. In this evidence you have given to-day have you mentioned England?—I mentioned the whole three kingdoms.

5015. (*Mr. J. Y. Buchanan.*) The pot still only occurs in Ireland and Scotland?—There may be a very inappreciable quantity of pot still made in one distillery in England.

5016. You quoted some figures given before the Select Committee in 1891. Have you any remarks to make upon them?—I thought it would be interesting to see how the quantity disposed of at the present time compared with 1891, and I find in the Report of the Select Committee that the quantity passed into consumption during 1890 was 28,000,000 gallons. For the past year the proportion is 32,511,316 gallons. Then there was exported in 1890 3,500,000 gallons, and for the past year there was exported 7,341,077 gallons. Then there was used for methylation during 1890 1,500,000 gallons—that was the British spirits as against what was imported from abroad. For the past year it was 6,055,285 gallons. Then during 1890 there was used for medicinal purposes and tinctures 1,000,000 gallons. We have no figures for that class for the past year, but for arts and manufactures there was used 435,915 gallons. Then there is the quantity estimated as lost by evaporation in 1890, 2,500,000 gallons. For the past year the Inland Revenue Reports do not give the information under this head, but making the deductions from the other figures, the balance left which really would be waste by evaporation is 5,845,863 proof gallons. So that the total outgoing in 1890 was 36,500,000, and last year it was 52,189,456 proof gallons, or an increase, roughly, of 15,700,000 gallons.

5017. What conclusions do you draw from those figures?—The natural conclusion is that the consumption has increased of every description, both for potable and for non-potable spirits, and that the product of patent still spirit has vastly gone up compared with what it was in 1890 and 1891.

5018. Can you give us some account of the proportions of the two classes consumed as whiskey in March, 1907?—I have tried to arrive in a very rough way at the proportions used as whiskey during the year ending the 31st March, 1907, and the following are my conclusions. Of course you are aware these are not official figures, and I could not arrive at them in any other way than by a very rough computation. But the grain distillers are a very small proportion in the country, and we can compare notes with one another, and find out how our production and consumption seem to be going. In that way we regulate as far as possible our production to the consumption. Unfortunately the malt distillers and the pot still distillers are not in the same happy position, and they sometimes make a great deal more than what is necessary for the consumption in the country, but these figures are arrived at from various sources, and I think can be taken as fairly accurate as we can possibly give them. The total quantity of patent still spirit made during the year ending 31st March, 1907, was 34,225,946 proof gallons.

5019. (*Chairman.*) In the United Kingdom?—Yes, my lord. I deduct from that quantity what was used for industrial purposes, which is entirely made out of the patent still. It is the cheaper product, and therefore is used where a cheaper alcohol is required. There was used for industrial purposes during that year 6,055,285 gallons. Used in arts and manufactures 435,915 gallons. Then I have taken the approximate quantity for gin at 6,000,000 gallons. That figure, my lord, I cannot vouch for at all. It was given as the figure in 1890-91. I endeavoured to arrive at an approximate figure by asking a London distiller, but he was unable to tell me anything about it. He said he thought I should be correct in assuming the quantity for gin was pretty much the same as it was in those days. So I have taken the figures which I have mentioned, 6,000,000 gallons, which means that I deduct from the total patent still spirit made 12,491,200 gallons, which leaves 21,734,706 proof gallons of patent still whiskey made during that year. But in addition to what was made during that year the patent still distillers cleared from bond in excess of their make in Scotland about 1,500,000 gallons; in England about 350,000 gallons, and in Ireland about 650,000 gallons. So that adding these three quantities to the former residue we get a total quantity of spirits used as whiskey by means of the patent still of 24,234,746 proof gallons. The total quantity disposed of during that year for home consumption, less gin, was 26,511,316; exported, 7,341,077; and waste by evaporation, etc., 5,845,863, giving a total outgoing of 39,698,256, of which the patent still accounts for 24,234,746, or about 61 per cent. of the whole, leaving for the pot still 15,463,510, or about 39 per cent. of the whole. I believe that is a conservative estimate of the relative consumption of the two classes of whiskey. I have heard it stated generally by the trade that it is about two-thirds to one-third, but in working it out in figures I arrive at these percentages: 61 per cent. against 39 per cent. Yet it is stated by the pot still distillers that the predominant partner in the blend should not be entitled to the name of whiskey.

5020. I suppose in Scotland the principal amount of whiskey drunk is patent still?—Certainly. There is more patent still than pot still drunk.

5021. I think you have a pamphlet issued by your Company in 1905, giving a short history and development of the grain whiskey industry, which you would like to hand in?—Yes. (*Handing in same.*)

(Adjourned for a short time.)

5022. (*Mr. J. Y. Buchanan.*) You were going to give us some historical details, I think?—If I may, I should like to refer to the last paragraph in the pamphlet which I have handed in, and which sums up pretty much the grain distillers' view of this question. In that pamphlet I state: "In conclusion, the claim is made for Scotch grain whiskey that it has supplied, and is supplying, a much-felt want for a lighter form of stimulant than is available in the heavy malt whiskies; that it has increased the sale of these malt whiskies by the skilful manner in which it is blended therewith; and that, as the whiskey of commerce is now undoubtedly a blend of malt and grain whiskies, nothing should be done to interfere with the name which it has justly earned for itself, viz., 'Scotch whiskey.' If it is desired to have a more distinctive title for pure Highland malt whiskey, there is nothing to hinder such a whiskey being so described, and thereby distinguish it from its more popular competitor, which will be quite content with its present sobriquet, 'Scotch whiskey.'"

5023. In Scotland, of course, you talk of "whiskey," simply?—Yes.

5024. As a matter of history, of course it is not in your recollection, but in business have you documents to show when it was that whiskey was really exported from Scotland into England?—No definite data, I think, can be submitted to you with regard to that fact, but undoubtedly it was after the blending of

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whiskey came into operation, which was about the year 1860. It was after that date that whiskey was actually introduced into England; not in large quantities to start with, but from that date onwards it was sold as whiskey.

5025. The unblended whiskey before that date would not have suited public taste?—No, I think not.

5026. I suppose it was really the large manufacture of patent still whiskey that made it possible to do so, because that gave you a milder form of whiskey?—I think there is no doubt of that fact.

5027. The exportation from Scotland to England of whiskey is now very large?—Yes, very large.

5028. Have you any figures you can give us as to that?—I think the Inland Revenue Commissioners' report for last year gives the figures as between England, Scotland and Ireland. In England there is consumed of whiskey 22,000,000 gallons, in Scotland 6,800,000 gallons, and in Ireland 3,600,000 gallons, roughly.

5029. You wish to make some remarks about Irish whiskey?—The earliest records I could find of the composition of Irish mash was in 1600. First of all, as to the term usquebaugh, which is supposed to be the origin of the word "whiskey." Usquebaugh was not really whiskey, but "an article which was flavoured with raisins, fennel seeds, and other things mitigating the heat, and making the taste pleasant." That is the way it is described in 1600.

5030. (*Chairman.*) What ingredient was usquebaugh?—Barley principally, but it was flavoured with other essences. Then in "Morewood's History of Inebriating Liquors," published in 1838, it is stated that "In 1590 it nowhere appears that the Irish then distilled from any description of grain but what had been malted, as the practice of using raw grain is of much later date." In the same book it is stated that the spirit made from pure malt is considered superior to that made from a mixture of malt and grain. By this time only illicit distillers used entirely malted grain, as "from a want of scientific knowledge and proper utensils they conduct their business in a different manner from that pursued by the licensed traders." It would therefore appear that pot still whiskey as now made in Ireland is neither in material nor method the same as was originally employed, but is a development on what was described as scientific lines just as the patent still process at a more recent date became.

5031. (*Mr. J. Y. Buchanan.*) The distillation in both countries has been a matter of development?—Yes.

5032. Now, have you anything to tell us with regard to the Scotch practice?—With regard to Scotland, I can produce an old copy of the "Encyclopædia Britannica," dated 1815, in which an article appears on the manufacture or the distillation: "The kind of grain employed in this country for manufacturing whiskey is barley. The processes are easier and the spirits produced have a more agreeable flavour when the barley is malted. But, in consequence of the duty upon malt, a portion of unmalted grain has been introduced into the distilleries. This portion has been gradually increased, and amounts very commonly to four-fifths, and in some cases, it is said, to nine-tenths of the whole mixture of raw grain and malt."

5033. (*Dr. Horace T. Brown.*) That is the article by Professor Thomson I think?—I saw that in evidence, and I am rather afraid that Professor Thomson must have quoted this article, because this is 1815.

5034. That article in his book is dated 1849?—Then I think it might almost follow that his article was an extract.

5035. He wrote that article evidently quoting from an older article?—Very likely. Then there is another paragraph I should like to read from this article, because it goes into the description of distilling in those days. It finishes up with these words: "Such is the mode followed in Scotland for obtaining whiskey. The distillers are at pains to purchase the best English barley which they can procure. They are certainly in the right to select English barley for malting; for English barley when malted yields more spirits than in the state of raw grain. But for that portion of the grain which they use in the distilleries without malting, it would be their interest to employ the best bigg which they can procure. For good bigg, while in the state of raw grain, yields rather more spirits than an equal quantity of the best English barley. And as it can be purchased at a cheaper rate than barley, it could obviously be employed with economy, as a substitute for that grain. Bigg is greatly deteriorated by malting it; of course it would be improper to employ it in distilleries in that way. But the distillers might employ it in the state of raw grain with great advantage." Now I point to this article as showing that at that time, as at present, the distillers really used the material which they thought most profitable; their object in using English barley at that time apparently was for the sake of economy. They got better results from it, and it was more economical than using their own beer, or bigg.

5036. (*Mr. J. Y. Buchanan.*) Is "bigg" barley?—A kind of barley, but a different kind of barley from that at present in use.

5037. You have something to say about the introduction of maize into the distilling?—Yes, it was after the introduction of the patent still. It was not introduced until after that, and it was not imported into this country until long after the introduction of the patent still.

5038. The principal reason being that it flavoured the whiskey more than the other?—Yes, it was not available in those early days.

5039. When it came to be imported the pot stillers did not make use of it?—No.

5040. Was that because it tainted his whiskey?—I do not know the reason, but I suppose their own particular product was of a certain character, and they did not choose to alter that character.

5041. Which it certainly would have done?—Yes. It certainly would have done to some extent. The earliest records I can find in our own company's possession are that in the years 1864 and 1865 maize undoubtedly was used in the mash at two of our distilleries at that time—namely, Cambus and Cameron Bridge, but I have gathered other evidence from old people who have stated that in 1859 maize was used at that time, but, as I say, we have actual brewing books in 1864 and 1865 which show that maize was used then in the mash.

5042. Had the change of the duty on Irish spirit any effect on the production?—The duty on Irish spirits was raised in 1858 to the same level as that on Scotch spirits. That probably was the beginning of the Irish grievance as far as Irish whiskey was concerned. Then, again, in the year 1860 the duty on both classes of spirits was raised to 10s. per gallon.

5043. It is from about that date that you date the general practice of blending?—Yes, before that date there was a little blending went on duty paid, but the Government at that time allowed blending to be conducted in bond, which undoubtedly gave a very great fillip to the art of blending, and from that date, I think, was traced the present practice of blending.

5044. Have you any knowledge of how whiskey was sold in Scotland before that date, was it sold by the name of the distillery or how?—It was sold mostly by the name of the distillery. Of course previous to that date the railway facilities were not so great as they are to-day, and the custom of drinking whiskey was very largely a local one in the neighbourhood of the distillery. If it was malt they drank malt, and if it was near grain they drank grain whiskey. The difficulty that was experienced at that time was that if a man who wanted a particular kind of spirit or who drank a particular type of whiskey in one district of Scotland migrated to another district he did not get the same particular flavour of whiskey that he had been accustomed to, and he was inclined to think that that was not the same kind of whiskey he was getting, and objected on that account. In Ireland, on the other hand, the flavours of pot still whiskies were generally alike or very nearly alike, and I think to that has been traced the fact of the general practice in those days of Irish whiskey being preferred to Scotch.

5045. You speak of the general practice in England?—Yes. Irish whiskey was a settled thing, and in Scotland we had various varieties of whiskey. They knew which one they would get when they asked for Irish, and to that practice is attributable the blending which came into vogue.

5046. At first when the patent stills came in that was mostly in the neighbourhood of the large towns?—Yes.

5047. I suppose patent still whiskey first came into vogue in the towns?—Yes.

5048. And that displaced the old form of whiskey?—Yes.

5049. (*Dr. Cushny.*) Do you know if the Excise made any difference in them?—They do not now, but I do not know whether they did at that time. Now it is all British plain spirits.

5050. (*Mr. J. Y. Buchanan.*) You note that in 1874, 1875, and 1876, the plea that blending was fraudulent was brought forward?—Yes. I have an article here from the "Irish Times" of the 5th April, 1876, giving the discussion which took place in the House of Commons on that date. I think the arguments that were used at that time were very similar to those that are used now, that good old Irish whiskey made in a pot still was entitled to the name of whiskey, and that everything produced by the patent still was silent neutral spirit. The discussion was brought in by Mr. W. H. O'Sullivan, an Irish member, who claimed that this practice of blending in bond between pot still and silent spirit was a fraud and should not be permitted, and he petitioned for the appointment of a Committee of the House of Commons to inquire into this matter, and eventually the Motion was defeated by 69 for the Motion and 149 against. I should just like to read a little bit from the report of what Mr. Anderson, of Glasgow, the mover of the Amendment, said: "Mr. Anderson moved an amendment declaring that in the opinion of the House blending was not necessarily adulterating, and it was inexpedient to deprive traders in British spirits of trade facilities which were allowed to traders in foreign spirits and wines and various other bonded articles. He said that on previous occasions when this question was brought forward, he had refrained from contradicting many of the statements made, but he had come to the conclusion that the greatest lies in the world, if sufficiently reiterated, would at last get somebody to believe them. (Laughter.) The whole object of this motion was an attempt on the part of the Irish distillers, who found that their trade had been slipping away, to get it back again. They found that they could not get the extravagant prices which they used to get years ago, for it had been discovered that malted spirit could be made by another process—a more pure spirit than the Irish, and a better spirit (laughter), at a considerably lower price, and because the Irish distillers found that they could not keep up their old price, they wanted to get the Chancellor of the Exchequer to go to their assistance, and endeavour to keep it up for them."

5051. Do you wish to call the attention of the Commission to the report of Dr. Harris?—It is not the actual report, but it is an extract from the "Daily Express" of Tuesday, August, 6th, 1907. The same material was given in all the larger provincial papers of that date. It is headed: "What is pure whiskey? Islington Medical Officer's comparisons." Then it goes on: "Many interesting comparisons between pot still whiskey and patent still whiskey are made by Dr. A. E. Harris, Medical Officer of Health for Islington, in his annual report. The following are extracts from Dr. Harris' remarks:" Then he puts them in two columns, "Pot still whiskey" and "Patent still spirit." First of all he states: "Pot still whiskey (1) costs as it comes from still at lowest, 2s. 6d. per gallon. Patent still spirit (1) 10d. to 1s. per gallon. (2) Pot still whiskey is kept three years before using, and each year adds at least 6d. per gallon to its cost. (2) Patent still spirit is generally used at once, and consequently it is sold at one-third to one-sixth of the price of pot still. (3) Pot still whiskey greatly improves on keeping. (3) Patent still spirit. Little or no improvement in keeping." I need not read the whole thing, but in regard to the materials employed this is what it says as to patent still spirit: "It is generally made in this country from Indian corn, but it is sometimes distilled from potatoes, beet, or even saw-dust.

5052. (*Dr. G. S. Buchanan.*) You do not know whether he is referring to a patent still for distilling spirit in general or whether he is referring to patent still whiskey in particular?—No. The article was published all over the United Kingdom, and the only inference was that it was to damage the patent still product generally I think. I might at this point introduce another cutting from the "Westminster Gazette" of the 23rd of last month, that is after the Commission had begun to sit. The article is headed: "The Patent Still.—By a revenue official." It goes on to describe the two processes of the pot and patent still, and finishes up with this: "Such is Coffey's Distilling Apparatus, or, as it is spoken of now in the present controversy, the patent still. It produces spirit quickly, and it produces that spirit strong and free from accompanying impurities from the 'wash.' It is seldom, if ever, used for distilling a 'wash' obtained from malt and grain. It produces spirit from a 'wash' made from a variety of substances, such as molasses, sugar, glucose, or bran. But the spirit is itself pure, and has its commercial value for making cordials, such as British brandy, for methylation, or for other purposes." I should just like to say here that this is a sample of the articles that we have been treated to in the public Press for the last two or three years, and more than one article has appeared under the name of "By a revenue official."

5053. (*Mr. Guillemard.*) The name is always anonymous?—Yes.

5054. And I take it that he will remain anonymous?—Yes, I suppose so. We endeavoured to obtain the name of the Revenue official, but we were only told that as it was a paid article they could not divulge the name. That is only a sample of the articles that have appeared during the last two or three years, to the detriment of the patent still product. The arguments have always been to that effect, but the "Revenue Official" ought to know at this time of day that patent still whiskey is sometimes made from malt and grain, and is not always made from molasses, and, in fact, that no molasses, beetroot, or potatoes are used in this country, I think, for the production of whiskey.

5055. (*Mr. J. Y. Buchanan.*) That article says it produces a good and pure spirit from these various ingredients like molasses, and so forth. I should think the fair conclusion which the public would draw from it is that it would produce still better spirit from good material, such as is known to be used in whiskey distillation?—Yes, but there it makes use of the statement that no grain is used in patent still—"seldom, if ever," are the words used.

5056. One can put it in different ways. I think you have something to say about the price at which the patent and pot still whiskeys can be supplied?—I go into the question of the important differences in pot and patent still, and show how it is that one class of spirit sells at a higher price than the other. First of all, I draw attention to the fact that the two classes of spirit are not sold at the same strength. Grain whiskey in Scotland is always sold by the proof gallon; in Ireland at 25 over proof gallon. Malt whiskey in Scotland, if in the Lowlands, is sold by the proof gallon, and in the Highlands at 11 over proof gallon. In Ireland both patent and pot still whiskeys are sold at 25 over proof gallon. Another important difference arises when whiskey becomes old. The practice in Scotland is universal that where malt or grain is sold it is at the original gallon. In Ireland the pot still distillers sell on the bulk gallon, and if any loss occurs in bond it is not charged to the customer. They charge only on the actual quantity in the cask at the time it is cleared or invoiced.

5057. In Scotland do they charge on the original contents of the cask?—Yes. In the evidence given before this Commission most of the Irish distillers have altogether failed to recognise the difference, so that when a celebrated Irish whiskey is sold at 5s. per gallon in Ireland that is only 4s. per proof gallon comparing it with a Scotch grain whiskey article. Then I also mention in my evidence that the pot still distiller never charges, or very rarely charges, for bond rent. In the case of grain distillers they all charge bond rent. After the first six months if it is the distiller's wood we charge rent, and after twelve months if it is in buyer's wood, or if we supply casks and charge for them, we then charge warehouse rent after twelve months. That rent is at a scale which works out at 1d. per proof gallon, or ·90d. to 1d. per proof gallon. That is added to the price when the whiskey becomes old, whereas in the pot still whiskey it has to be included in the original price charged, and that accounts materially for the difference in the

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price between one article and the other. Other questions which influence price are (1) the materials included in the mash; (2) the method of distillation; (3) the location of the distillery and the conveniences for getting the raw material in and the finished product out; (4) the capacity of the distillery and the length of time it is kept working each year; (5) the goodwill in the name represented by extra profit. Then I can give the different prices ruling at the present time for the different classes of whiskey: Highland malt whiskey, 3s. to 4s. 6d. per 11 over proof gallon; Islay whiskey from 3s. 8d. to 3s. 10d. per 11 over proof gallon; Campbeltown whiskey from 2s. 6d. to 2s. 9d. per 11 over proof gallon; Lowland malt whiskey from 2s. 2d. to 3s. 2d. per proof gallon; Scotch grain whiskey from 1s. 6d. to 1s. 7d. per proof gallon; Irish pot still whiskey from 2s. 6d. to 5s. per 25 over proof gallon; Irish patent still whiskey from 1s. 9d. per 25 over proof gallon. Allowances come off all these quotations according to quantity taken, also for wood, removal, and cash, but these I have discarded in every case. These are the cost prices charged.

5058. You compare the differences of the price of the whiskey with the price of the mash which would produce it. What is your conclusion as to that?—My calculation is that between the highest priced whiskey made at the present time in the pot and in the patent stills the difference in the mash in the actual grain used will not be more than 4d. per proof gallon. In the case of Irish whiskey it will not be so much owing to the practice of using a large proportion of unmalted grain. The difference between pot still and patent still in fuel and wages will not exceed 1d. to 2d. per proof gallon, according to the location of the distillery. The cost of the delivery of the whiskey and the agent's commission accounts for a considerable sum in the case of Highland malt whiskies, but does not apply so much to Lowland malts or Irish whiskey. Then in the items which I have enumerated here 4 and 5, the capacity of the distillery and the length of time it is kept working each year and the goodwill in the name represented by extra profit, these amount to anything. Patent stills are usually run all the year round, and with the large turnover their working charges are kept fairly low and a smaller profit suffices. In the case of the pot still there are many distilleries which are closed down six months in the year, some more and some less. As regards the small Scotch malt distilleries this shutting down is not so serious as the plant is usually small and very few men are kept on during the stoppage. It is different, however, with the large Dublin pot distilleries, some of which are not being worked beyond a fourth of their full capacity. This naturally runs up the cost, but does not add a fraction to the value of the whiskey. You can see, of course, that if a distillery is kept standing for six or nine months in the year and a highly-paid official or manager is there employed the cost of the quantity made is materially increased, but that does not in any way increase the value of the whiskey.

5059. The distilleries that are shut up for six months in the year are shut up because there is not sufficient demand?—To a great extent of course, but there are other considerations. Undoubtedly they do not get the same results in the warm weather as they get in the cold weather, but that is not the entire cause. If they had the trade they would keep on working for the whole twelve months. There are one or two of the Highland malt distilleries that work through the whole year, but those are exceptions.

5060. In recent years has much been added to the pot still distilleries in the country? If nearly all of them are lying for six months idle it would make one suppose that there would be no great additions to the plant of the distillery?—In the north of Scotland during the last fifteen years there have been made great additions to these distilleries for the simple reason that trade was undergoing a boom at the time, and every one thought to make Scotch whiskey, it was something like a gold mine, and they could not produce enough; every distillery wanted to be in the swim and get the benefit of that extra trade, but at the present moment there is a very large number of these distilleries shut down entirely, showing it to be a mistake and that there is not the trade for them. That is to a large extent the cause of the present slump in the malt whiskies.

5061. Has the number of pot stills gone back to about the number that it was before the boom?—Those working I suppose would be approximately what they were before.

5062. So that the pot still production is pretty well stationary?—Yes

5063. And any development in spirit production falls upon the patent still?—Yes. I think I have shown in these statistics I have given that the whole increase has been in the patent still product. I think I also should say that to sum up the whole difference in cost between the patent still and the pot still whiskey so far as the materials and the process are concerned is at most 6d. per proof gallon. Any additional prices charged must be put down to the location of the distillery, the fixed charges which run on when the distillery is standing, the necessity for including the storage charge in the price and the need for a large margin of profit owing to the small turn-over. These last-named items, while a justification for the distilleries charging a higher price, in no sense enhance the intrinsic value of the whiskey.

5064. Going back to what you said just now with regard to the price of the whiskies, you stated that allowances come off all these quotations according to the quantity taken, also for wood, removal and cash. Does that come off what you said just now?—In one case I am taking the selling price and in the other case the cost price.

5065. I understand?—I think it may be put in a very rough and ready fashion, as the ordinary profit of patent still whiskey to the distiller. I mean if you take 1d. per proof gallon on the patent still article the pot still article derives 10d. to 1s. profit.

5066. You mean the profit on the pot still whiskey is ten or twelve times as much as on the patent still?—I do.

5067. (*Chairman.*) Is that as between the distiller and the merchant?—Yes, as between the distiller and the merchant. After it goes into the merchant's hands the profits are divisible in different ratios. The patent grain distillation has been held up before this Commission as being a very profitable concern, but the profit arises through the large quantity or turnover which they have, and it is not on the large profit per gallon.

5068. Is that 1d. that you give us relatively or actually 1d.?—It is relatively as 1d. is to 10d. or 1s.

5069. Would you object to give the actual profit?—Not at all; I have a statement that I can put in. I can put in the actual cost of two distilleries, which I can vouch for. These are the actual working costs. (*The same was handed to the Commission.*)

5070. Have you the selling price, too?—The selling price of the grain whiskey is 1s. 6d. per proof gallon, malt whiskey is 3s. 6d. 11 over proof, or brought down to the proof strength it will be about 3d. off—3s. 2½d. or thereabouts.

5071. I will not give the figures, but the profit is much greater relatively than the cost of pot is?—Yes, the profit on the pot is greater.

5072. You gave 3s. 2d.?—3s. 2d. proof for the pot still whiskey.

5073. Is that the selling price?—Yes.

5074. There is a great difference in the cost between the pot and the patent. The selling price is much higher in the price of the pot?—Yes, very much higher.

5075. You have given as reasons the non-constant employment and non-occupation of the premises, and so on?—Quite so.

5076. If it be that in the trade there is a common price as it gets to the retail consumer, someone gets a good deal of advantage upon these figures that you have been mentioning?—I do not know that that follows. When it comes to be blended together the question is whether the blender does not use an older whiskey in the blend than would be the case if he sold it pure.

5077. Take the pure whiskies. If pure pot and pure patent is sold at the same price, that means the higher price, then somebody gets a good deal of profit out of that?—If you come to add the duty.

5078. But the duty is the same for both?—That is the very point that I think is often overlooked. When

you come to add the duty on to the price the ratio between the one cost and the other is very small indeed.

5079. There is that difference remaining still on the gallon?—Still, the percentage is very small.

5080. The man gets a difference between what we may call X and Y when it gets to the gallon?—It is represented usually that the price of pot is two or three times the price of patent; but I say that is not so.

5081. You are right. You say that when you get to the blending you get the matter removed?—Yes.

5082. (*Mr. J. Y. Buchanan.*) You say the Scotch malt distillers benefit by the growth of blended whiskies?—Yes, I think they do. I mean to say by that, I think that but for blending, the trade in pure Scotch malt whiskey would not have been so large to-day as it is; that is to say, it is the introduction of the blend that has caused the greater consumption of malt whiskey.

5083. At the same time, there is a great consumption of pure, plain grain whiskey, is there not?—There is. When you say "great consumption," of course it is relatively small, but there is very considerable consumption.

5084. Is there in Edinburgh and Glasgow, and the large towns, a very considerable sale of pure grain spirit?—Undoubtedly.

5085. Would you say that the ordinary public-house traffic in Edinburgh and Glasgow is principally in grain spirit?—No, I should not go that length. I should not go that length. I should say that the principal consumption in the towns is of blended whiskey; probably 80 or 90 per cent. of the whole sale would be blends in varying proportions.

5086. I am talking about the ordinary cheap whiskey that is sold over the counter, which probably would not be blended with more than 10 per cent. of malt whiskey?—Probably that is so in the low-class public-houses.

5087. We have heard from several witnesses that even pure grain whiskey is very much fancied by a large number of workmen in Scotland?—Yes, undoubtedly. There are some parts of Scotland—in the neighbourhood of the grain distilleries—where that is so. To take the town of Alloa, near Stirling, where we have three distilleries in that centre, there is very little else than grain whiskey drunk. There are three distilleries in the neighbourhood of Alloa, and there they ask for whiskey under the name of the distillery, and all the local publicans there sell grain whiskey pure. It is the same in Fife where Cameron Bridge whiskey is made. Cameron Bridge is a grain distillery, and up till 10 or 15 years ago I suppose 80 per cent. of all the whiskey sold in Fife was pure Cameron Bridge. Now, since the blends have been developed so largely, that proportion may not hold good, but even now the large preponderance of whiskey sold in Fife is pure Cameron Bridge.

5088-9. You wish to say something about the use of the name "whiskey," and its application to patent still spirits equally with pot still spirits?—Yes. In Scotland the practice, of course, is to call whiskey either whiskey or spirits. The old practice in Scotland amongst the general public was to describe it simply as spirits—asking for a glass of spirits or a glass of whiskey, and the practice is the same even to this day to find people asking for it under the name of spirits. The two words are really synonymous.

5090. "Spirits" was considered somewhat of an euphemism?—Yes.

5091. Instead of using the bald word "whiskey"?—Yes.

5092. (*Chairman.*) I suppose there is no other spirit drunk in Scotland but whiskey? They do not drink gin in practice? Is not that so?—That is so; the principal liquor is whiskey.

5093. They do not drink brandy or gin as a practice?—No.

5094. (*Dr. Horace T. Brown.*) I found the same thing in the old reports of 1798 and 1799—that the words "spirits" and "whiskey" were used indiscriminately?—Yes. It is very much the same with the words oats and corn. In Scotland the word "corn" is usually applied to describe oats. "Corn" applies to all grains, wheat, rye, barley, or oats. If a farmer says he has sold 50 quarters of corn he means that he has sold 50 quarters of oats, and in the same way the word "spirits" applies to "whiskey."

5095. (*Mr. J. Y. Buchanan.*) It is used as a delicate way of putting it?—Yes; especially among the female fraternity.

5096. I suppose there is no doubt that if you rule out patent still whiskey there is hardly any whiskey in Scotland?—That is so.

5097. I think you have something to say about the improvement of patent still whiskey by keeping. The statement that it improves in keeping has been a great deal contested?—Yes. Before I go to that I do not know whether further evidence is required as regards the name "whiskey" and "spirits," because I can produce invoices dating back to 1830 and onwards where the terms "Aqua Vitæ," "spirits," and "whiskey" are applied indiscriminately, whether from malt or grain distilleries. I have those invoices here.

5098. (*Chairman.*) Will you take one as an example?—I will take the earliest records that I have. I have here an invoice dated 17th July, 1830, from a distillery at Edinburgh, where there is a pure malt whiskey invoiced as "Aqua Vitæ," and the price at that time was 7s.

5099. How do you know it was pure malt whiskey?—There was no patent still in those days. This is 1830, prior to the date of the introduction of the patent still. Further on it amplifies it, and calls it "peat malt," and it is charged at that: "Two casks aqua vitæ," and further down it calls it "peat malt." In another invoice it uses the word "aqua," striking out the word "malt," showing that at that time—namely, in 1830—"aqua" was made from some other substance than malt. I shall hand these in, so that the Commission can see them. That process really goes down. I would also like to show you a grain invoice from the Cambus Distillery, then owned by Mr. Robert Moubray, the predecessor of the Distillers Company of Cambus. It is dated 25th February, 1867. This was after the introduction of the patent still. It invoices two puncheons of aqua. I may say that Cambus used this word "aqua" to describe their product down to about two or three years ago. They never described it by any other name than "Aqua." Then I wish to refer to two invoices here in favour of John Graham, of Glasgow. One is dated 21st December, 1878, by a Campbeltown distillery, McMurchy, Ralston, and Company. This distiller invoices his product as "Spirits," which was a pure malt whiskey. The same week the same firm received an invoice from our own company, from Glenochil Distillery, of the 26th December, 1878, where it is invoiced as "Two puncheons whiskey." In one case it is invoiced as "Spirits," in the other as "Whiskey."

5100. (*Chairman.*) And perhaps they were both wrong?—That may be, but in those days it appears they were no nearer coming to a definition than we are now. Then I can give many instances which I have here, but it would take up the time of the Commission too long. There is one very excellent example in the Highlands, the Highland Park Distillery, Kirkwall, Orkney, in November, 1907. On the front of the invoice they mention two casks containing so many gallons of aqua, and on the back of the invoice they put: "Conditions under which whiskey is sold and held at the Highland Park Distillery." Then they go on to describe it as follows: "All spirits will be held free of rent charge," and so on, so that on the same invoice we have the words "Aqua," "Whiskey," and "Spirits" all applying to a Highland malt distillery. Many of the Highland distilleries at the present time do describe their products still as "Aqua"—in fact, so far as I can see, there is no case of a Highland malt distillery describing their product as "Scotch whiskey" even down to the present day. They describe it by the name of the distillery either as whiskey simply, calling it Cardow, Glen Grant whiskey, or any other class of whiskey or aqua. Cardow, I believe, has up to within a few years ago called it "Aqua"; that is one of the noted distilleries.

5101. (*Mr. J. Y. Buchanan.*) Are there any special proprietary blenders that call it aqua in preference to whiskey?—I do not think so.

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5102. It does not come to the public as aqua?—No, it is between the distiller and the dealer. The name spirits and aqua are used indiscriminately. After it comes from the merchant to the public in every case it is called whiskey.

5103. (*Chairman.*) In going to the public it does not come from the distiller, but going from the merchant to the public is it ever described as blended whiskey if it is blended?—Sometimes. I think a number of firms call their product blended Scotch whiskey.

5104. They state it as a fact?—Yes. Then in regard to prices. Here is an example of an auctioneer's catalogue in 1888, where it describes Cameron Bridge, Carsbridge, and Cambus, Glen Ochil, all of which are patent still distilleries under the name of "Scotch whiskey." Then I have here some lists sent out by merchants or dealers. There is one of September, 1894, by James Calder and Company, Limited. Price list of Scotch whiskeys in bond. The Scotch whiskeys that he gives include Boness, Glen Foyle, Cameron Bridge, Cambus, Caledonian, Carsbridge, and in fact every one of these whiskeys which are pure grain whiskeys, with the exception of Glen Foyle, are described as "Scotch whiskeys." You will find in this list some of the prices mentioned run up to fairly high figures, as high as 5s. 9d. in the case of Cameron Bridge, for a whiskey twelve years old.

5105. (*Mr. J. Y. Buchanan.*) I suppose that is about the maximum which you would have for patent still? No, I think you will find grain whiskey as old as 20 years.

5106. (*Chairman.*) Under what circumstances would that reach 20 years old? Would that be intentional for the purpose of trade?—Yes. They will be very old liqueur whiskies where they use the grain to blend with fine rich old malt—they require the grain to marry or to blend the several malt whiskies a little closer together. Then I have another list here from Matthew Robin and Son, of Glasgow, dated 1894. At that time they were very large holders of all classes of whiskey, and when they describe their list of parcels of whiskies they do not call them either Scotch or Irish or anything else, but simply whiskey. They put them in the order of grains, Lowland malts, Campbeltowns, Highland malts, Islays, and Irish Taking the prices of these I have looked at several here to show the relative ageing of the whiskey. In the case of Cambus we have whiskey of December, 1893, that is a little less than a year old at the time when this list was published, which is quoted at 1s. 6d. in distiller's wood. That of May, 1884, that is ten years old, is quoted at 4s. 6d., also in distiller's wood. It has been suggested that grain whiskey only improves by being kept in a cask that has contained sherry, but here is a case where whiskey has been kept in distiller's wood that has never contained any other whiskey than Cambus, and they make out that that particular whiskey in ten years has increased in price from 1s. 6d. to 4s. 6d. Then take the case of Lowland malt. I have a case here which is quoted in November, 1893, at 2s. 4d., and in December, 1889, at 3s. 3d.: that means about 3d. per annum added for age. In the case of more than one whiskey it was 4d. per annum. Then take another Lowland malt, Wishaw, November, 1893, 2s. 4d.; December, 1890, 2s. 11d., a difference of 2½ pence per annum. In the case of Campbeltown, Hazelburn, December, 1892, 3s. 1d., and December, 1888, 3s. 11d., a difference of 2½d. per annum. Then Highland malt, Cardow, March, 1894, 4s.; March, 1890, 5s. 10d., a difference of 5½d. per annum. That is on the bulk price and not on the proof price.

5107. (*Mr. J. Y. Buchanan.*) The point being that patent still whiskey improves as well as malt so as to command a very much higher price?—Yes. I have a dozen other lists here, and I could amplify them in the same way.

5108. That is not necessary. You tell us you have put on sale for experimental purposes pure Cambus whiskey?—Yes. Our reason for doing so was that both at Islington and Clerkenwell it was stated most distinctly that if the public knew they were getting grain whiskey or spirit made through the patent still, they would not drink it, and that they would not have it. We wished to put this to the test, and immediately after the Clerkenwell case was decided, or rather when they came to no agreement, we put before the public a pure patent still whiskey. It had been sold in Scotland before that, pure and unblended, both over the bar and direct from the distillery, but so far as we were concerned we had never put it before the public direct on the London market. I will show you the bottle itself so that you will see we did not hide anything. (*The same was handed the Commission.*) We describe this as pure patent still Scotch grain whiskey. Then we gave the name of the Distillers' Company, Limited, Edinburgh, and we further put at the bottom of the label, "This is whiskey in its purest and most wholesome form. It is distilled in Coffey's still, which is acknowledged to be the most scientific form of still yet invented, and is noted for its freedom from fusel oil. Nothing but the very finest grain and malted barley is employed in its manufacture, and it is the healthiest of all whiskies to drink."

5109. (*Chairman.*) Is that your own composition?—Yes.

5110. You did your composition justice in that description. What was the sale?—We sold several thousand cases of that, my lord, but we sold it under very disadvantageous conditions, because it is not our business to sell direct to the public. Our only reason for doing so was to give a guarantee to the public direct from the distiller that there was no blending or adulteration in any shape or form, but that it was pure patent still product as sent out from the distillery. We put it for sale into the hands of different houses who had their own brands to sell in preference to this, who would not be likely to push the sale of it, and they only supplied it when requested to do so.

5111. Are you going on manufacturing it now?—Yes. We are going on manufacturing it at the present time. One witness stated in evidence here the other day that the demand so far as his firm was concerned had not reached more than two cases. Whether it was due to the prominence given to his evidence here or to the very peculiar merits of this whiskey I do not know, but he sent an order the next day for another case. I wish to show you at the same time the different advertisements that we put out to show what we said about it. That is a show card that we put out at that time. (*The same was handed to the Commission.*)

5122. (*Mr. J. Y. Buchanan.*) Have you any more to say about the Cambus?—Only this, that we had had a comparatively large sale for the Cambus pure in Scotland long before this arose, and we have at other distilleries sold pure grain whiskey. I applied to a Cambus distillery within the last two or three weeks to find out the extent of trade that they sold pure in the district, and during the last year they supplied to the local trade surrounding the Cambus district nearly 10,000 gallons of pure patent still whiskey, which was sold over the bars direct to the public who asked for it as Cambus whiskey, who know that it is a patent still product, and that it is made from maize and other substances that we use, because the general public all over Alloa see the train loads of grain going into the distillery. There is no secret of it, and in spite of this fact they ask for this particular article knowing what it is made from and the process by which it is made. For the last 30 years, ever since the Distillers' Company was formed, they have carried on a comparatively small trade among private customers. It is not a trade we cultivate at all, because our sale is with wholesale dealers, but Cambus had a family trade before we took the distillery over, and these customers have been continued, sometimes altered and varied, but at the present time we are supplying over sixty customers direct with small 10-gallon kegs of Cambus whiskey. This is invoiced as grain whiskey or grain aqua in some cases. Most of these customers have been supplied with whiskey for the last 20 or 30 years. There is another matter I wish to bring before the Commission, which is the practice of filling in distillers' wood.

5113. (*Chairman.*) Is the Cambus one of the Alloa whiskies?—Yes. We have at Cambus Distillery a number of distillers' casks, casks that have never contained anything but Cambus whiskey; there are 15,226 casks; branded oak casks, namely, 2,308 puncheons, 11,631 hogsheads, 1187 quarters, and 100 octaves.

5114. How many gallons is a puncheon?—About 140 proof gallons. The proportion filled in sherry wood casks as compared with plain wood of grain whiskey would be about 20 per cent., and at our Highland Malt

Distillery we fill about 33 per cent. or 35 per cent. in sherry wood, so that we actually fill more at our Highland Malt Distillery in sherry wood than we do at our grain distilleries. I think that clearly shows that it is not the sherry flavour that gives the character or improvement to grain whiskey.

5115. (*Mr. J. Y. Buchanan.*) With the grain spirit do you put it into new wood or do you begin with a fresh cask, or do you season it in any way?—I do not think any whiskey, be it grain or malt, is improved to the same extent by putting it into new wood as it is by putting it in a cask after it has matured and has contained whiskey. There is a certain harshness in the whiskey coming from the wood, that is lost after the cask has been used for some time.

5116. How do you season the casks before you put the best whiskey in?—The casks are subjected to a steaming process and otherwise to draw off the woody flavour. There is nothing the distiller has to fight against so much as the woody flavour which the casks impart to the whiskey. If we ever get a cask of whiskey with this particular flavour in it it is rejected and has to be re-distilled before it can be used.

5117. You have mentioned in your *précis* about the different classes of Scotch whiskies, have you anything to say about them?—I think this has already been brought out pretty clearly in evidence, that there are various classes of malt whiskey sold in Scotland. There are Highland malts, Lowland malts, Islays, Campbeltowns, and grains, all distinct classes of Scotch whiskey, while out of a mixture of two or more of these have evolved the blends which comprise the large bulk of the trade in Scotch whiskies to-day.

5118. In one of those lists that you read just now—I think it was a whiskey house—they detailed their whiskies as "Highland," "Lowland," and so forth, and "Irish," so that they used Irish as a qualification just the same as Campbeltowns or Islays?—Yes.

5119. You have some suggestions here supposing the name has to be altered. Have you anything to say about that?—As regards labelling I do not advocate that such should be done. I think it begs the question to start with, and it really would involve the question that patent still or grain whiskey was not whiskey. I do not think there should be any further discrimination between grain whiskey and malt whiskey than there should be between Highland malt and Lowland malt whiskey. I object strongly to Highland malt whiskey being sold as such which contains any proportion of grain. I would equally object to grain whiskey being described as such containing any proportion of Highland malt. I think the classes are distinct entirely, but they are all Scotch whiskies. The only classification that could do good would be if you are going to sell pure unblended whiskey, describe it by the name of the distillery and also probably add the same as in Cambus, patent still grain whiskey or Highland Malt Whiskey, Lowland Malt Whiskey, or Campbeltown Whiskey, but if it is blended then it should become "Blended Scotch Whiskey."

5120. Would you keep the name "Whiskey" for the potable spirits distilled in Scotland and Ireland?—Quite so.

5121. Would you exclude the potable spirits distilled in England?—No. Whiskey I think could be made equally well in England, Scotland, or Ireland.

5122. Would you have a specific term "Scotch Whiskey," "Irish Whiskey" and "English Whiskey"?—You can sell it either as "English Whiskey" or as "Whiskey."

5123. You would not admit any foreign spirit?—No, not as either Scotch, Irish or English whiskey. Whiskey can be made outside the United Kingdom, such as Canadian Whiskey, but they cannot be classified as part of the United Kingdom.

5124. It would come to this that whiskey would be the distinctive name for potable spirit distilled in the British Isles?—Quite so, from cereal grains.

5125. And then you could add whatever special specification you liked which was correct?—Quite so.

5126. That is to say "Irish" if it was distilled in Ireland, "Scotch" if it was distilled in Scotland, or if you want to go more nearly to the root of the matter, the particular distillery or, say, blend, but you would keep the word "Whiskey" for the potable spirits distilled in the British Isles?—Yes.

5127. Have you anything more to say about that?—No, there is really nothing. If labelling is to be done it could of course only be done in the way you suggest.

5128. Of course there are the blends which have fancy names?—Mostly registered brands.

5129. They partake of the character of a trade mark?—Yes.

5130. You have here something about your company's stock. Have you anything to say about that 29,000,000 proof gallons? Have you anything to tell the Commission particularly about that?—It shows really that it explodes the idea that patent still whiskey does not improve. We have 29,000,000 gallons of patent still whiskey in our bonds at the present time. That does not belong to the distillers, but belongs largely to our customers, who are paying rent charges, and I hardly think it likely that these customers would pay for the whiskey and hold it for years if it was not maturing.

5131. What percentage of that lying at your stores would the unsold be?—The unsold, I should say, would be less than one-fourth of the whole. Three-quarters of it are sold.

5132. (*Chairman.*) Have the customers paid for the whiskey? Are you holding it after sale?—The customers pay for the whiskey when it is sold to them.

5133. You find the accommodation?—Yes, we find the accommodation and charge a rent.

5134. (*Mr. J. Y. Buchanan.*) The duty is not paid?—No; the duty is actually paid when it goes out of bond.

5135. (*Chairman.*) The Excise officer has superintendence over it while it is in bond?—Quite so.

5136. Is that your average?—Yes; 29,000,000 gallons is rather less than what we have had during the last two or three years. It has been going down the last two or three years. We have held as much as 33,000,000 gallons, I think.

5137. (*Mr. J. Y. Buchanan.*) During the boom period?—Yes.

5138. (*Chairman.*) What is the average number of years it remains in bond?—I have got those figures here. In dealing with the warehousing, to show the large extent to which warehousing has been instituted in Scotland, our own company since 1877, that is 30 years since its formation have expended in bonded warehouses £335,000. That has all been done to furnish the trade with the requisite accommodation to mature their whiskey.

5139. (*Mr. J. Y. Buchanan.*) You give details here of the amount of your stored whiskies by the number of years?—Yes. I have gone very carefully into these figures, so far as our own company is concerned, and have taken the year 1906. These figures were got out some time ago, and, after deducting the quantities we sent out direct from store—that is, without its being bonded at all—for rectification and methylation purposes, also deducting what was removed new by customers to their own bonds, not for immediate consumption, the balance of the clearances for that year was made up of 27 per cent. under one year's age, 14 per cent. over one year and under two years, 11 per cent. over two years and under three years, 11 per cent. over three years and under four years, 13 per cent. over four years and under five years, 24 per cent. over five years. This does not even show the full age at which the whiskey went into consumption, because our customers may hold it a considerable time in bond—either unblended or after it is blended. I should say you require to add at least six months to these figures to get an accurate idea of how soon it goes into consumption. I should think it would be safe to reckon that about 33 per cent. of our grain whiskey goes into consumption under two years of age.

5140. (*Dr. Horace T. Brown.*) It shows 41 per cent. on your figure?—Yes, 41 per cent. as it stands; but I say if we reckon the time the blender keeps it himself, and take the difference between the one year and the two years and add it on, you will find about 33 per cent. may be reckoned as a fair estimate; so that the blenders at the present time are doing to a very large extent what it is suggested should be done by compulsory bonding.

5141. (*Mr. J. Y. Buchanan.*) 67 per cent. is, as a matter of fact, bonded for over two years?—Yes. That,

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I should think, is a very much larger percentage than was the case in 1890-1891, when the Select Committee reported before, so that the opinion expressed at that time, that blenders were doing themselves what was required, has been maintained and augmented. They are getting older whiskey now than ever they did before.

5142. Assisted by what you pointed out, namely, that, when the boom came, it was necessary to build stores to keep the whiskey?—Yes.

5143. The going off of the boom had something to do with the ageing of the whiskey?—Yes.

5144. (*Chairman.*) Has the retail price gone up with the age?—I do not think so. I reckon that the price of the whiskey to-day is rather lower than it was, but as to that I could not speak with any accurate knowledge. I am told on all hands by the blenders themselves that they are putting a more aged whiskey into their blends than ever they did, and they have not advanced their prices.

5145. Have you anything else that you wish to add?—Yes.

(*Chairman.*) Then the Commissioners must ask you to attend again to-morrow morning.

The witness withdrew.

Adjourned to to-morrow, at 12 o'clock.

ELEVENTH DAY,

Tuesday, 7th April, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
H. T. BROWN, Esq., LL.D., F.R.S.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

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Mr. WILLIAM H. ROSS, recalled.

5146. (*Dr. Horace T. Brown.*) I should like to ask you a few questions about the prices which you have given us for materials, and so forth. I see this list on page 2 of your *précis* does not include malt. The prices for barley, maize, rye, and oats per cwt. are given, but we have not the price of the malt, which I suppose would be something like 10s. a cwt., would it not?—Yes, I should say that would cover it. We make all our own malt, of course.

5147. With regard to barley, maize, rye and oats, I suppose those prices are not the prices when the grain is kiln dried?—No, they are as they come into the distillery.

5148. In kilning you take out 7 per cent. of moisture, do you not?—From 8 to 10 per cent. in the case of maize.

5149. So we have to raise those prices in order to compare them with the malt to the extent of 7 or 8 or 9 per cent?—Yes.

5150. If we take 7 per cent. that will bring barley to 7s. 6d. per cwt. against 10s. for the malt; and the maize to about 6s. 6d., the rye to 8s. 8d., and the oats to about 6s. 9d.?—Yes.

5151. On page 13 you have given us some further particulars. You say, I think, that the difference in cost is 4d. a gallon?—Yes.

5152. Your words are, "Roughly speaking, the difference in the cost of the mash between the highest priced whiskey and the patent still whiskey will not be more than 4d. per proof gallon"?—Yes.

5153. I have been trying to check that from these prices you have given me, and I make it about 5d. or 5½d.?—This figure was taken from actual experience over the whole twelve months, but, of course, it may vary in accordance with the price of the materials at the time that you take it.

5154. If we take these prices of materials, I make the difference between a malt mash and a mash of one-third malt, one-third maize, and one-third rye to be about 5½d. a gallon?—I should say probably it might work out at that.

5155. You perhaps have a little understated that difference?—As I say, I took it from actual experience of the prices during twelve months; but it may be so according to present values.

5156. You have given us some necessary corrections to apply to the price of whiskies when we are comparing the patent still whiskey or the Lowlands whiskey with the Highland or the Irish whiskey?—Yes.

5157. It seems to me that is rather an important matter. I have made those corrections, in order to see how these various prices compare, and I find that the highest price you have given us for Scotch grain is 1s. 7d. at proof, and the lowest price for Irish pot still at proof is 2s. So that they approximate very closely there?—Yes.

5158. But you say that if those whiskies were kept for five years there would be a rent charge on the patent still whiskey which would not affect the other one?—Quite so.

5159. But simultaneously with that, of course, those whiskies would be increasing in value?—Yes.

5160. The question is: do they approximate closer together in price as new whiskies or with age?—That depends very much, I think, upon the brand of whiskey. Some pot still whiskies increase more than others. The lower price pot still whiskies, I believe, do not increase in value to the same extent that the higher class pot still whiskies do.

5161. But do they advance in value more rapidly than the Scotch grain, or as rapidly?—As a general rule, I do not think they do.

5162. You have used here an argument that in comparing the two prices we must bear in mind there is a rent charge of 4d. on one and not on the other?—Yes.

5163. If we compare those two whiskies of five years old and put the rent charge on one we must also at the same time increase the value of the whiskies in the ordinary way?—Yes.

5164. The question is whether that brings them nearer together or further away?—I do not think it

materially differs. Of course, you have the lower price to start with in the one case, and the interest on that is not so heavy as on the dearer article.

5165. So that, taking those figures, we may regard the higher priced Scotch grain as very nearly equal in price to the pot still?—The lower priced pot still.

5166. Another important point connected with cost which you have not mentioned here, and it is one which perhaps affects the patent still distiller more than the pot still distiller, is the question of the utilisation of the bye-products—the yeast, for instance. Yeast, I suppose, is manufactured mainly in the patent still distilleries, is it not?—Entirely.

5167. I suppose the pot still distillers could not manufacture yeast economically?—It has never been done, at all events. I do not think it is possible.

5168. The intermittent nature of their work, I suppose would be against it?—Yes.

5169. They are closed down for six months in the year, and therefore would not be able to maintain a trade which they had acquired in the winter?—That is one reason.

5170. It struck me that that was the reason?—I do not know that that is the only reason. I do not know that it is possible, even in a pot still, to get the result even when they are working; but I would not like to give a strong opinion on that, as I am not a practical distiller.

5171. You use filter presses for your wash?—Yes.

5172. I suppose the utilisation of the yeast materially reduces the cost?—At one time it did, but I do not think it materially reduces it now to the same extent. The price of yeast in the market has fallen considerably, and we do not get the same results from it that we did when we started making it.

5173. We had a price given us by Mr. Tedder, in the first day's evidence. He mentioned something like £35 to £40 a ton?—Yes, about that. When we began to make this same quality of yeast, about 20 years ago, the price would range up to £60 a ton.

5174. But even at £35 a ton I suppose there is a very good saving?—There is a good profit, otherwise we should not make it.

5175. And that is a very large business, I suppose—one that we have taken, practically, from the Germans during the last few years?—Yes, it is very large.

5176. Do you know what the whole yeast business amounts to in a year?—I should say the total manufacture would be 20,000 to 25,000 tons a year of British yeast.

5177. That is exclusive of what you use in your distilleries?—Yes.

5178. Then that would come to a very large figure?—Probably that may be overstated, but certainly from 20,000 to 25,000 tons, I should say.

5179. Do the patent still distillers practically supply the whole of the bakers with yeast now?—No, there are still large quantities which come from abroad from Denmark, Holland, Germany, France and Belgium. Belgium, during the past two or three years, has come in as a very strong competitor against the British maker. I should think the imports at the present time would be about 200 tons a week from the Continent.

5180. You do gain, of course, some advantage in respect of that in your patent still whiskies?—Yes.

5181. I went into a little calculation last night to see if I could form some idea of what the difference was. I was looking at it entirely from my general knowledge of fermentation, and not from any special knowledge of distilleries. If I put it on a piece of paper would you mind telling me whether it is something near the mark?—If it is possible for me to do so with my general knowledge also, I should be very glad.

5182. I will put it in the form of a possible reduction in price per gallon?—I should think you are pretty nearly right.

5183. You have no objection to the other members of the Commission seeing what I have written?—None whatever. Of course, I do not vouch for the entire accuracy of that, but I think it is approximately correct.

5184. If labelling of the blends were carried out as has been suggested by some people, you would like to see that labelling carried out thoroughly?—Yes.

5185. How would you suggest that the Irish whiskies should be labelled in the cases where a certain amount of grain has been used in their preparation?—I do not think in labelling, if it is a blend, that you can go further than call it a blended Irish whiskey. Any proportions that you could put on would, I think, give no guidance to the public as to what the result would be.

5186. I am not speaking of it as a blended Irish whiskey, but an Irish pot still whiskey, which, of course, is made partly from grain. Would you require it to be labelled differently from the Scotch pot still whiskies in which no grain has been used?—In the case of the Irish pot still whiskies, I think they are usually labelled, and should be labelled: "Irish pot still whiskey," as against, in the case of the Scotch whiskey, "Scotch malt whiskey," or "Scotch pot still malt whiskey" if it is entirely malt.

5187. But you would not contend there should be any indication to the public that the Irish whiskey was not a malt whiskey?—Nothing should be given on the label that might induce the public to believe it was an entirely malt whiskey. I do not know that there would be any value attached to it by saying: "This is an Irish pot still whiskey, made from malt and grain."

5188. I only want to get your idea on the question. Do you think there is any distinctive difference in the flavour of the Irish and Scotch patent still whiskey or spirit, whichever you call it?—There is a difference, I believe which can be detected by the trained expert.

5189. Even when the materials are similar?—Even when the materials are similar. I should not detect it very likely myself, but I have talked with experts who have assured me they could detect it. There is the same difference as between two patent still whiskies made in Scotland. Of course, there are differences there.

5190. There are differences in the various distilleries, due in some cases to materials?—In some cases to materials, and in other cases, even when the materials are the same, there are different flavours attached to one distillery to what are attached to another distillery.

5191. Is there a very distinct difference in flavour between two patent still whiskies, one of which has been made from 30 per cent. of malt and 70 per cent. of maize, and the other which has been made from one-third malt, one-third rye, and one-third maize?—There is a difference. I do not know that there is a very noticeable difference.

5192. But if there is no difference why do you use rye in some cases in place of maize?—Rye is very largely used in the patent still distilleries on account of the yeast product—not entirely, because we use rye at distilleries where we do not make yeast at all.

5193. That is not for flavour?—Not particularly for flavour.

5194. Of course your rye costs you more than your maize?—Yes. We use rye where we are producing yeast, and that is the principal cause which we use it for there, but in other distilleries we use malted rye, and we consider the rye malt gives a thicker and heavier whiskey, and improves the body of the whiskey.

5195. Then it does affect the flavour?—It does to some extent.

5196. But before yeast was manufactured in the patent still distillery was rye used?—Not to the same extent. In those cases where it was used it was in the form of malt.

5197. It gives you a wort which gives you the largest yeast outcrop?—Yes.

5198. (*Dr. Adeney.*) I unfortunately did not hear your evidence yesterday, but from the answer you have just given, may I ask is the use of the rye malt for the production of pot still whiskey?—No, of patent still whiskey.

5199. I understood you to say you malted rye?—Yes, that was for a patent still.

5200. (*Dr. Cushny.*) How long do you think the patent whiskey improves by age?—Patent still whiskey

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is used up to a very long age, but I could not say really. I do not think it improves much beyond seven or ten years at the outside, but it certainly is used in blend of greater age than that.

5201. It improves up to seven or ten years?—Certainly.

5202. I have got the impression that the patent still whiskey was kept so long, not that it really improved, but because the people are accustomed in Scotland to ask for old whiskey. I wondered whether it was not simply because you wished to comply with the custom?—No, I think not. It really does improve, although probably not to the same extent after five years say.

5203. Has the amount of patent still whiskey that is drunk really increased in amount since 1890?—Certainly, I think so. I should say that, roughly, the proportions will have gone up from half-and-half to two-thirds patent still to one-third pot still.

5204. I think you said there were 9 millions of increase since 1890?—Yes.

5205. But 4½ million gallons of that goes for methylation, does it not?—Yes, that is so; that is 9 millions in the production, not in the consumption. If you refer to my figures you will find that the total increase in the consumption is about 16 millions since 1890. You will find I say that on page 5 of my *précis*.

5206. The total increase in consumption is about 4½ millions?—No, you will find in the paragraph about that I say 15,700,000 gallons for all purposes; and then I see I do say that 4½ million gallons have gone into consumption.

5207. That does not seem a very large amount if the change of blends is so marked?—But you notice in exportation also there is a large increase which is mostly also blended whiskey.

5208. (*Mr. Guillemard.*) With regard to your figures as to the output of patent still whiskey in Scotland on pages 3 and 4 of your *précis*, could you tell us at all how you have arrived at those figures, and on what sort of lines you have collected your information?—I got it from the distilleries themselves.

5209. I take it, then, that the figures you give of the output of patent still whiskies are the distilleries in your own combination, plus the figures for other patent still distilleries which have given you the information?—Yes, with one exception in the case of the Glen Mavis, Bathgate, which makes an entirely patent still malt whiskey. Theses figures do not include the quantity from that. That was the only distillery which refused the information.

5210. Does it practically cover the ground of the output of the total patent still spirit for Scotland?—Practically; there may be an addition of anything from 50,000 to 100,000 gallons, I should say.

5211. Then I take it you have been in communication to get all those figures with all the patent still distillers in Scotland?—Quite so.

5212. I notice your Company, the Distillers Company, Limited, of Edinburgh, have got a distillery in Liverpool?—Yes.

5213. What happens to the grain spirit that you make there? Is any of it blended with any sort of whiskey?—I have no special knowledge of this, but I believe it is. It is largely used in England for blending purposes simply as grain whiskey.

5214. How would the blend be described in that case?—I think in that case it is merely sold over the counter: it is not used for bottling, so that it is really sold as whiskey.

5215. Not as Scotch whiskey?—It may be, but that is after it leaves our hands. In any case, if it is so, I say it should be stopped.

5216. Does your Company supply blenders or merchants with patent still spirit for mixing with brandy at all, or rather I may put it, do you know that any of the spirit supplied by you to merchants is used for blending with brandy?—No, I have not heard that has been done.

5217. You have no reason to think it is?—I do not think so.

5218. I suppose you in some cases have to supply the cheapest form of grain whiskey to one or other of the ordinary consumers? Take Scotland. What would be the lowest it can be supplied at?—I should be glad to write that down, if I may.

5219. Perhaps you could answer this. Do you consider the price of the Scotch patent still spirit that was sold to Davidge, in the Islington case, which I think was 1s. 1½d. per proof gallon, an ordinary price for a really cheap grain spirit?—No; that was a low price, certainly. That was not supplied by us.

5220. No; but that would be an exceptionally low price?—Very low.

5221. (*Dr. Horace T. Brown.*) At that time?—To a customer of the size of Stevens, Buer and Co., I should say even at that time it was a low price.

5222. (*Mr. Guillemard.*) Do you think that distillers and blenders and wine and spirit merchants generally have any confusion in their minds between grain whiskies and pot whiskies? Do you think they know generally when they get a particular whiskey what it is, however it is invoiced to them, or do they go by the invoice?—You mean the merchant and dealer?

5223. The blender, the merchant, and the dealer?—That does not cover the retailer. The wholesale houses certainly know.

5224. Would they go by the invoice?—They would know both by the invoice and by the quality.

5225. And by the place they got it from?—Yes; quite so.

5226. They would have means of testing the quality?—They know the different distilleries that they buy from and the produce of certain stills.

5227. That holds good for the wholesale people; but it would not hold good when it got beyond them at all, would it?—No.

5228. You said in your opinion a substantial improvement took place in the quality of all patent still whiskey as the result of keeping it for two years. Do you go as far as that?—I do not know that I quite said all patent still whiskey; but, as made in Scotland and Ireland at the present time, that is so.

5229. How would you describe the improvement?—A mellowing influence, and generally in the same fashion as pot still whiskey improves.

5230. Would it acquire flavour?—It would, to a certain extent, according to the cask that is supplied. If it was a sherry cask it would acquire more of the sherry type of flavour.

5231. You have guarded yourself now by saying that does not necessarily apply to all patent still spirit. Do you think it would apply to the product of those distilleries where a large part of the business is making yeast, and where, I suppose, they put out rather a low class spirit. Would that result in their putting out a low class spirit?—No; it does not necessarily follow. In fact, the first distillery we made yeast at we get the highest price in the market for its product.

5232. And the spirit so produced would improve by ageing, like other spirit?—Yes, undoubtedly.

5233. I gathered your own combination had increased the number of your own pot stills. Is that so?—We built the one in the Highlands about the year 1893, I think.

5234. I cannot quite make out what your object was in doing that, if you are mainly concerned with the other product?—It was in order to obtain the necessary flavour we require. As well as being distillers, we are exporters; we blend for export only, and we require a certain quantity of high class, high flavoured pot still whiskey to blend with our patent still product. We buy a lot of other Highland at the present time, and we use our own distilleries' production in the same fashion.

5235. For export mainly?—For export.

5236. Entirely?—We sell it to other blenders in this country, and I suppose they use it for consumption in this country.

5237. (*Chairman.*) I have gathered that one of the distinctions between these two classes of whiskey, the pot still and the patent still, is that as a rule there is more maize used in the patent still whiskey than in the pot still?—That is so, my lord.

5238. There is some used in the pot still now?—Yes, there is a small quantity, I believe, used in pot stills.

5239. But as a rule the proportion is considerably more in the patent stills?—Undoubtedly.

5240. Can you draw any comparison in the quantities between barley and maize?—In which still?

5241. Take the two cereals, barley and maize?—I should think in the pot still there would certainly be a difference of flavour.

5242. That is the result, but do you know the chemical composition of the two cereals, the maize and the barley?—No, I do not think there is a great chemical difference between the two.

5243. Do you know enough to say whether maize is a healthy cereal?—I should say so, my lord.

5244. As to the result, I understand that the pot still whiskey is stronger, of greater flavour and more pungent?—Yes, it is stronger, by means of the flavour—not in alcoholic strength.

5245. But it certainly is more pungent?—Yes.

5246. And stronger in flavour and bouquet?—Yes.

5247. Can you tell me this, as it is a very practical test? If a bottle of pot still whiskey is put in one hand of a man and a bottle of patent still is put in the other, whether, on drinking those two whiskies, on which he would become intoxicated first?—I would rather not answer that. I do not know, and really I could not tell from practical experience. I really could not answer that question.

5248. Perhaps you would rather not say he would get intoxicated at all. But surely there would be some difference between the two?—I should think the pot still being the heavier whiskey and having more of these bye-products would affect the constitution more quickly than the patent still would.

5249. You have just mentioned that there has been a great increase in the relative consumption of patent still whiskey?—Yes.

5250. The patent still whiskey is a milder whiskey?—Yes.

5251. And that must be a question of palate as well as the effect?—Yes.

5252. Have you any knowledge as to whether the taste of the public has been changing in favour of the more matured spirit?—I think that is undoubtedly the case from ordinary everyday experience. You will get that probably from the blenders who come after me, who will speak of that more practically than I can, but certainly all my information goes in that direction.

5253. You know that you cannot trace the cause of taste in respect of wine, but you think there has been from your practical knowledge a changing in the taste of the public in respect of these whiskies?—I think so, in the same way as with all other beverages. With regard to beer, for example, a much lighter beer is now used than used to be the case.

5254. I do not understand that anybody is saying that the sale of the patent still whiskey should be stopped, but would that be at all approaching a practical measure now, as things stand nowadays, to put a slur on the patent still as regards sale?—The name of "whiskey" has been built up, I think, very largely owing to the presence of the patent still whiskey in a blend, and I think it would be most unfair to take away the goodwill in the name "whiskey" from the product from which it has been built, and give it to a product which is not appreciated so much by the public. The name "whiskey," after all, is a trade mark for a certain article, and if a business has been built up on that trade mark it would be very hard that it should be taken away from the article on which that goodwill has been built and give it to another product.

5255. The public, as we know, are drinking very large quantities of the blend, and that is the principal consumption?—Quite so.

5256. Would it be feasible to make the public accept another name for the blend? Supposing they went on and said, "We shall call it whiskey"?—They would continue asking for whiskey, and if the publican could not give them any other article than pot still when they enquired for this, then they would be as much prejudiced as they are at the present day.

5257. I am not thinking of the trader at all, but I am thinking of the rights of the public and the consumer. What is your idea as to the knowledge of the ordinary consumers? Take Scotland. Would they know the difference between pot still whiskey and patent still whiskey?—As such they do not, my lord. I have taken the trouble during the past few weeks since this Commission sat, to inquire of probably a dozen or more men of the world if they knew what they got when they asked for "whiskey," and they said they only knew when it pleased the palate, but as to how it was made or from what it was made they had no sort of idea.

5258. Taste is difficult to define, but we are told sometimes it grows by what it feeds upon. I suppose a person often begins to like a particular class of whiskey because he is accustomed to it?—Yes.

5259. If this consumption of blended whiskey has been going on—and that is what they like—I suppose as they like it they would wish to have it continued?—Yes.

5260. (*Dr. Horace T. Brown.*) There is one point on your *précis* omitted yesterday which seems to me rather important. You made certain objections to any fixed standard for whiskey, your reason being the impossibility of proving by the present chemical methods of what a given blend is composed?—Yes.

5261. You have certain evidence to bring forward certain trials which you have made of this?—Yes. Here are particulars of a certain blend that is largely sold as Scotch whiskey.

5262. Is *this* all one blend?—That is one blend. It is composed of two Islay whiskies, 11 Highland malt whiskies, and five grain whiskies. I sent a bottle of that whiskey (you see the proportions given there at the bottom of that document) to seven different analysts, eminent men. The letter which accompanied the samples was to the following effect: "Dear Sir,—We are sending you under separate cover one quart bottle of whiskey, and shall be obliged if you will kindly analyse this and let us have your results at your early convenience. After having made your analysis, would you kindly let us know what opinion you form of the whiskey?" I have purposely left the names of the analysts out of this copy, but I can give you the originals. If you refer to the bottom of the first page you will find an interesting tabular statement. Taking the lowest result from any analyst as 100, the analyses of the eight chemists vary for volatile acidity from 100 to 205; for ethers from 100 to 459; for aldehydes from 100 to 1,022; for furfurals from 100 to 740.

5263. That must be wrong, surely?—That is the percentage if you look at the table. The lowest one there is one part, and it goes up to 7·40.

5264. This should be hundreds?—Yes, I am taking it in hundreds at the bottom—as 100 is to 740. That is giving furfural as one part in one case and 7·40 in another.

5265. Then these are ratios?—Yes

5266. (*Dr. Adeney.*) Are you quite sure that all these results from different analysts are returned on a comparable basis?—I will hand the original in, which gives all the information we got.

5267. If you will hand these in we will look them over?—I will do so.

5268. (*Chairman.*) Has there been any variation in the quality or strength of the spirit as shown by above and below proof? As years have gone on, as an average result, has the spirit increased or decreased in strength?—No, I do not think appreciably.

5269. The public taste has not affected that?—I do not think so, my lord. There has probably been an inclination in the case of very cheap whiskey being sold at a low strength to reduce the price and enable probably a sale to be made in that form, but with that exception I do not think the taste has gone in favour of a less strength.

5270. You mentioned whiskey at a low price. Have you any knowledge that in the great competition among the public-houses there has been a demand for whiskey at a low price?—Undoubtedly, I think that is so. That is more or less the case in all working-class districts where there are large factories. I believe in the North of England, for example the Newcastle district, the trade there is very largely in low-priced whiskies.

5271. I do not mind saying that I have received a communication that in consequence of tied houses very often the brewer takes possession of the whole house, and he gives the orders for the spirit as well

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as looks after the beer, and that in consequence orders are given for very low priced whiskey. Do you know anything of that?—I have heard it stated, but I could not speak from actual experience.

5272. You have heard it stated that that was so?—Yes.

5273. When the whiskey is made under such conditions as is the case with very low priced whiskey, how is the low price arrived at? Is it because damaged material is used, or how is it arrived at?—No, I think the larger proportion of the cheaper product of patent still whiskey is not necessarily a bad article, but simply cheap.

5274. That would include the maize?—Yes.

5275. In the cheap product you get the very cheap whiskey. Is that injurious for consumption or not?—I do not think so, my lord. I think it has never certainly been proved that it is injurious to public health. It is probably unfortunate that so much new whiskey should go into consumption, but I do not think other than being less palatable that it is injurious to health.

5276. Would this cheap whiskey so produced be raw whiskey—new whiskey—or would it have been kept for any time?—It may have been kept for a few months, or probably a year. I have given in my table here the percentages we sent out under so many years, and undoubtedly there is a considerable trade in that new whiskey.

5277. But, I suppose, in order to keep the price down, which is the object of this commodity, you cannot afford to keep it a very long time?—No.

5278. The Commission are much obliged to you for the evidence you have given.

The witness withdrew.

Mr. J. C. Calder.

Mr. James Charles Calder, called.

5279. (*Mr. Guillemard.*) I believe you are a distiller and wine merchant?—Yes.

5280. You are a partner in the firm of Alexander and Macdonald, wholesale wine merchants, of Leith?—Yes.

5281. You are also a director of James Calder and Co., Limited, of Bo'ness?—Yes.

5282. What sort of distillery is that?—Bo'ness is a grain distillery—at least, it is a distillery with only a patent still in it. We make both from grain and malt, and also pure malt in a patent still.

5283. The distillery at Bo'ness, do you say, is only a grain distillery?—No; it is only a patent still distillery, but we make both from malt and grain, and also from pure malt.

5284. You are also a partner in the firm of James Calder and Co., of Stronachie Distillery, Pathstruie, Perth?—Yes.

5285. Is that a pot still distillery?—Pot still only.

5286. So that you can speak to both processes?—Yes.

5287. Could you give either a definition, or, if you prefer it, a description of what you consider whiskey is?—I consider whiskey is a spirit made from cereals saccharified by malt and distilled.

5288. Cereals grown anywhere?—Grown anywhere, I should say.

5289. Scotch whiskey is that same product distilled in Scotland?—Yes.

5290. And Irish whiskey the same thing if made in Ireland?—Yes.

5291. Materials coming from anywhere?—Yes.

5292. Could you give the Commission some information as to the average mash for grain whiskey that is used in Scotland, so far as you know?—I think there are practically only two mashes now used in Scotland, one with about 25 per cent. of malt and 75 per cent. of maize, and the other about one third of rye, one third of maize and one third of malt.

5293. Do you ever use molasses?—No, we never use molasses.

5294. Do you use a good deal of imported barley?—We use a good deal of imported barley, but we use Scotch barley also. It depends a good deal on the season. Some years we use a good deal of Scotch barley, but other years not quite so much.

5295. Is that anything to do with the price?—It has to do a little with the price, but chiefly with the quality of the barley. We want a sun-dried barley. A Scotch barley has not so great a converting power that foreign barley has. This year it is dearer, and we are paying more for foreign barley than we are paying for Scotch.

5296. How does the price of the foreign barley compare with the best English barley: say the barley that comes from Suffolk, or Norfolk?—This year we are paying from 29s. to 30s. for foreign barley, and you can buy Norfolk barley delivered to us at 34s. to 35s.

5297. Norfolk barley is high this year?—Yes, very high.

5298. Higher than for some years past?—I think it is higher than it has ever been in my experience.

5299. Then you come in your *précis* to a description in some detail of the two processes of pot still and patent still. We have heard a good deal of evidence on that, and I do not think the Commission need trouble you in detail upon that. You might tell the Commission what is the main point you wish to establish. Your main point seems to be directed to showing that in your opinion there is no essential difference in system between the two stills?—No.

5300. Can you give your views on that without too much detail?—In the patent still the distillation is more regular and the spirit is liquefied, if I might use that word, at more regular heat; that is to say, it is gradually cooled as it goes up in the rectifying column, and, of course, the impurities—we call them impurities—come off more regularly, so that the impurities you get in a patent still are of more regular a character than those you get in a pot still. In the pot still you practically boil it, and the heat varies to a great extent. There is no regular system of cooling; the impurities, to a certain extent, come over altogether, and there is not the same power on the part of the distiller to keep his bye-products exactly the same. There are also, of course, very many more impurities that come over with the pot still than with the patent still. That is what the patent still is for.

5301. As between the two processes the pot still is a more costly process to work than the patent still, I take it?—Much more so.

5302. Have you any particulars you would like to give about that?—With regard to the coal, we use nearly twice as much coal in a pot still as in a patent still. We use about 10 cwt. of cheap coal in the patent still and 17 to 18 cwt. of dear coal in the pot still per 100 gallons. I think that is, roughly speaking, about the figure. Then the wages are about twice as much per gallon, and I think the greatest difference is in the depreciation and interest on plant. I was calculating out from our own distilleries that the depreciation and interest in one case costs about 1½d. a gallon, and in the other it costs 6d. to 9d. a gallon.

5303. That is a new point to the Commission. Could you elaborate a little what the reason for that difference in depreciation is?—I was taking 5 per cent. interest and 2½ per cent. depreciation on the total cost, and it worked out to about 1½d. in the one case, and from about 6d. to 9d., according to the quantity made. The reason for that is that the quantity you make in the pot still in proportion to your capital is very small.

5304. You are allowing the same rate for depreciation in both cases?—For both interest and depreciation.

5305. Would you explain your last answer a little?—Very few pot still distilleries make over 80,000 gallons a year, and grain distilleries would never make

ess than one million gallons a year, and the proportionate cost of the plant is quite different. I put it very low. I should say in a pot still distillery you have from £20,000 to £25,000 of capital, and in a grain distillery you have about £100,000 of capital. In a grain distillery you make a million to a million and a half gallons, and in a pot still distillery you make from 40,000 to 80,000 gallons, so you can see for yourselves the proportion of interest and depreciation is very much larger in the one case than in the other.

5306. (*Dr. Adeney.*) Are you referring to the Irish pot stills?—No, I really cannot speak about Irish pot stills at all.

5307. (*Mr. Guillemard.*) Would you put it like this, that the relation of cost of the machinery to the output of the product is very much greater in the pot still?—That is exactly it. That puts my point in a nutshell.

5308. You do not attribute much of the difference in the cost as between the two whiskies to materials?—Not very much. I put it that according to the variation in the mash, and taking the present price that the grain whiskey costs from 1s. 2d. to 1s. 4½d. per gallon for mash, and the malt 1s. 7d., or, I might say, from 1s. 7d. to 1s. 8d. to be on the safe side.

5309. What would the corresponding selling price be?—You can buy Lowland malt whiskies from 2s. to 3s. per proof gallon, and Highland malt from 2s. 8d. to 4s. 4d., or 4s. 6d. in bulk, 11 over proof.

5310. New?—New. The grain whiskey you can buy from 1s. 3d to 1s. 6d. proof.

5311. Then with regard to storage there are reasons connected with the storage why the selling price should vary, are there not?—Yes, the malt whiskey price, which is much higher when it is invoiced, includes free storage practically as long as you like in Scotland. I have kept it twenty years and paid no rent. But in the case of grain whiskey, after the first year in the buyer's wood you have to pay from ¾d. to 1d. a gallon per year.

5312. A year is given free?—They give you a year free in your own wood, and after that year it runs from about ¾d. a gallon, according to the cask for storage.

5313. Would it be a fair inference from that that people consider that after a year it is all right for selling?—I do not think so. At least we get very large sums for warehouse rent, so the people evidently think it appreciates.

5314. Why do you give them a year free?—I think it is a trade custom.

5315. You would contend, would you not, that the products of the pot still and the patent still are both equally whiskey?—Yes.

5316. According to your experience when did any question first arise questioning the propriety of calling the patent still product by the name of whiskey?—I think the first time I heard about it was in the 1891 Committee.

5317. Have you any evidence you would like to put before the Commission as to what you know of the history of the question?—I have some old correspondence here, dated 1845, from Bo'ness Distillery, in which they deal with the "aqua," and also at that time they only had pot still there. Here is a letter from the distillery showing they used grain, that is to say, that it was not a pure malt at this time. This letter says: "I have sent you a sample of my new grain aqua, very fine quality, from ripe grain, well kept." He quotes that at 6d. to 8d. a gallon less than his malt. So that evidently they used grain even then.

5318. Have you anything more on that subject?—Practically not. I have half a dozen letters, and they all say "grain aqua" and "malt aqua" and "grain spirit." Then I have a book here of 1640 in which Sir William Gordon, who was called the Wizard of the North, refers to it as "*aqua vita*," and he says, "This liquor is distilled from bere mixed with aromatic herbs. It is made almost everywhere, and in such abundance that there is plenty for all. They swallow it in great draughts to the astonishment of the stranger, for it is excessively strong." That is referring to the County of Moray.

5319. What is your opinion as to the effect of ageing on whiskey?—I know from my palate and from tasting samples continually that there is an improvement in all whiskey from ageing. It varies according to the different whiskies and to the cask it is stored in, but anybody looking at a sample of new grain whiskey and a sample of the same three years old would see that there is some change which, from a chemical point of view, I do not pretend to know, but that there is a change is evident to anybody's palate, and that continues, in my opinion, in grain spirit up to seven or ten years old. We use the ten year old regularly in our blend, and in malt whiskey it seems never to stop as far as I have experienced it in the fine Highland malts.

5320. It goes on improving?—Yes. I have had a Highland malt made in 1876 which was very fine. That was nearly 30 years old.

5321. (*Dr. Adeney.*) Is that difference in flavour at all due to the formation of new substances or the mellowing away of harsh tasting substances in the new spirit?—It always seemed to me that there must be a change in the substances—some modification in the substances.

5322. You do not detect any new flavour as the ageing goes on?—No; it is more a change of flavour I should say, than a new flavour.

5323. (*Mr. Guillemard.*) Do you select any particular casks for storing your grain whiskey in?—We generally send on the casks as we get them empty and get them filled. We fill a certain proportion always in sherry wood, a small proportion, from 10 to 20 per cent.; it varies a little.

5324. You do not select the cask that has had a pure pot still whiskey in?—Never.

5325. You do not think anything would be gained by doing that?—No I went into that some years ago. We tried it, but I could not see that the result was worth the trouble of selecting. The extra flavour is so slight as compared to buying the malt itself and using that as the flavouring that it was not worth considering.

5326. Do you think there is anything in the statement that a grain whiskey takes the flavour of the oak cask it is put into?—No, I am sure it does not, or if it does nobody would buy it. Sometimes it does, I am sorrw to say, and then we have to reject it and sell it to a rectifier for rectifying spirit.

5327. It is re-distilled?—Yes. Oak flavour is particularly objectionable, and comes through anything.

5328. I believe you do a good deal of blending?—Yes, we have a blending business in Leith.

5329. With regard to the ages of spirits you use for blending, take the strong malt whiskies that you select for blending, does their age vary very much?—Yes, it varies very much. I do not think we use any patent still whiskey under two years old, and we use it up to 25 years old regularly. The lighter the malt whiskey the quicker it matures. The heavier the malt whiskey the longer we have to give it in cask to get the mellow flavour.

5330. There would not be any general period you could lay down?—It varies according to the blend, and the price you get, and the quality of the whiskey. I should think you might take it as a fairly safe average from 5 to 10 years old malt. I should think 75 per cent. of it in Scotland is used from 5 to 10 years old.

5331. Then with regard to the public taste. In what direction do you think the public taste is making in Scotland? Is it towards pot still whiskey, or patent still whiskey, or blends?—Entirely towards blends; for many years not only in Scotland but practically all over the world the tendency is all towards blends.

5332. And towards blends, I suppose, with particular names by which they can be recognised?—Towards certain particular types—practically to get the flavour of the fine malts without the heaviness. I will put it in that way.

5333. The ordinary person gets to know the whiskey he likes by a particular name, and asks for it by that name?—Very often.

5334. Do you think he knows it is a blend to begin with?—No, I do not know that he does, and I do not think he cares really. We sell a very high class blend. I was a witness in the Clerkenwell case, and I was asked if I had any objection to putting on a

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label, "A blend of pot and patent still." I said not the slightest. I thought I would experiment on the subject, and I put on a label saying it was a blend of pot still and patent still. That is two years ago. We sell a fairly large quantity of that whiskey considering the price, and we never had a single inquiry from any customer about it. *This* is the bottle on which I put the label.

5335. They went on drinking it just the same?—Yes. I think if there is any labelling of that description it should be made to apply to everybody certainly. Personally I do not think it would do the slightest amount of good.

5336. (*Dr. Horace T. Brown.*) It did not lose you any trade?—No. We never even had an inquiry or a letter about it.

5337. (*Mr. Guillemard.*) Will you read the label to which you refer?—"This whiskey is exactly the same as has been sold by us since we introduced this brand, and is a blend of whiskey made from malt in a pot still averaging 20 years old, and a small proportion of whiskey made from grain and malt in a patent still averaging over 10 years old. It has been entirely manufactured in Scotch distilleries, and is the finest type and quality of Scotch whiskey procurable."

5338. (*Chairman.*) That is an advertisement of a very high order?—I agree with you, my lord.

5339. (*Mr. Guillemard.*) With regard to blending your view really would come to this, that the addition of the grain whiskey is actually an improvement?—Undoubtedly.

5340. You go so far as to say that in your view, even if it were dearer than the malt, it would pay you to put it in?—I would buy it if it was dearer even

5341. Can you give the Commission any information as to the average age at which the whiskey made by you is cleared?—I made up a statement of the average age at which the clearances had taken place from our distillery in 1907. We cleared a little over one million gallons, that is to say, we sent that out, and the average age was three years. Of course, that whiskey is sent out under bond, and may have been kept longer, but it could not have been used younger than an average of three years. There were 25 per cent. of clearances under one year old.

5342. I suppose when you are asked for it you supply a cheap whiskey for sale in public-houses?—Yes, we have to. That is our business.

5343. There is a definite demand for a cheap whiskey?—Yes. I read some of the Irish evidence with regard to the prices charged, but in Scotland in the big towns there is a whiskey sold in public-houses at 5d. a gill and at 6d. a gill. At 5d. a gill that is equal to 13s. 4d. a gallon, and at 6d. a gill it is equal to 16s. a gallon. These people need to buy a cheap article to make a profit with their very heavy expenses in order to be able to sell at these prices.

5344. Would you have any objection to stating what price you would supply a really cheap whiskey at?—We sell a duty paid whiskey at as low as 10s. 9d. per gallon 23 under proof.

5345. What would be the duty?—The duty is equal to about 8s. 6d.

5346. That leaves 2s. 3d. for the whiskey and the carriage, and the other expenses?—Yes.

5347. Would that sort of whiskey be pure grain or a blend?—It depends upon the customer; sometimes it is pure grain, and sometimes there is a small percentage of malt.

5348. Up to how much?—Up to 10 per cent.

5349. Your *précis* suggests 10 to 20 per cent.?—For the 10s. 9d. whiskey I do not think we ever put much more than 10 per cent., but the price sometimes goes up to 11s. 3d., and then we put in more if they want it.

5350. And that whiskey you would sell definitely as a Scotch whiskey?—Yes.

5351. And so far as you know, is it a wholesome drink? Do you have any complaints of it on that score?—We never have any complaints, and it is regularly drunk, and has been for years.

5352. You have no complaints on the ground of health, or people not liking it?—No, we have never had any complaints.

5353. Do you supply the same whiskey to your Scotch customers?—Yes.

5354. Then if people want a dearer whiskey, how do you meet that demand? What more do they get for their money?—They get an older whiskey, and they get the flavour they like. Sometimes they like pure grain, and sometimes they like pure malt, but as a rule they get a blend.

5355. If they want pure malt they must pay for it?—No, we sell pure malt just as cheap as we sell a blend, and a pure grain. I do not mean as cheap as this whiskey I have referred to; but when you get up to 4s. a gallon for whiskey in bond we sell a pure malt or a pure grain, or a blend. Above that price we give them whatever they want. I must say they very seldom want a pure malt. You can buy a pure malt at 2s. new.

5356. (*Chairman.*) Do you say you sell pure malt and pure grain at the same price? Other things, as to age, and so on, being equal, I thought the pure malt was worth a higher price than pure grain?—So it is. Of course, the pure malt would not be so old as the pure grain. It is a question of age and quality. Some pure malts are worth twice as much as the others at the same age.

5357. (*Mr. Guillemard.*) Then apart from the blend which you say is the thing that is mainly drunk in Scotland, as between pure grain whiskey and pure malt whiskey, which would you say there is the greater consumption of now?—Pure grain I should say in Scotland is enormously larger.

5358. Does that kind go to places like the ordinary public-houses, or the bars?—Yes. I think practically the only pure malt you buy in Scotland is where you want what they call a special whiskey. They generally have a pure malt which they supply if asked for special whiskey, that is to say, when they get 5d. a glass and upwards.

5359. Then perhaps you could summarise what you consider the advantages that result from the use of grains in blends?—I think it makes the whiskey more palatable and more digestible and lighter. By using grain the cost is reduced and you are able to use a much finer and much older malt than if you had to supply the same article at the pure malt price, and you supply an article which the public want in the one case.

5360. You mean if you did not put the grain in and you had to supply an article at a given price you would have to use younger malt spirits?—Younger malt spirits and not such fine quality.

5361. I notice one thing in your *précis* which is worth calling attention to, because it so curiously conflicts with the experience of Mr. Pheysey. His experience was that when he put a blend in his price list he could not get anybody to buy it, and I think you have got almost the exact opposite of that in your *précis*, because you say since Mr. Fordham's judgment you have sent out 200 to 250 samples of pure malt whiskey. How has that resulted?—We have only got two orders and we got no repeats. Our customers went back again to their old blends.

5362. Comparing those two results, I think they lead to this conclusion, that people generally have got used to a particular sort of whiskey and like a particular sort of whiskey, and they go on asking for it and drinking it?—I think so. I think they find it suits their health better—I do not mean health exactly, but they find it suits them better.

5363. In other words, if you wish to make people alter their taste in whiskey you would have to take a great deal of trouble and push the rival article a good deal before you could have any effect?—I think you would have to revise the whole Scotch whiskey trade and make a different system.

5364. What would be your views about laying down a standard for whiskies?—A chemical standard, do you mean?

5365. A chemical standard. I mean a standard which they would have to conform to to be entitled to the name of "whiskey"?—I would be very much opposed to it. I think it would lead to far more harm than any good that it could do. If you fix a standard of the number of impurities it is so easy to increase your impurities, both in your pot still and in your

patent still. You could reduce the whole standard to a farce in a very short time, and it would simply be giving the benefit of that to any unscrupulous trader who wanted to take advantage of it; that is to say, he could send out a whiskey which he called a pure malt whiskey, or if there is any such restriction on whiskey, by using whiskey with a large percentage of impurities and a certain extent of grain nobody could detect which was which.

5366. Then with regard to the age limit of whiskey. What would be your views if it was suggested that all whiskey should be compulsorily stored for a certain period?—Personally, I would be quite in favour of it if it was a two years' limit.

5367. For all whiskey alike?—All whiskey alike.

5368. Several witnesses have taken the line before this Commission that a fixed limit for all whiskey alike would not operate very equally as between whiskey and whiskey. That is not your view?—My view is that of course there would be a certain amount of unfairness, but, at the same time, the benefit to be gained would be sufficiently great to counteract that unfairness.

5369. What do you think would be the benefit? Do you think the public generally have the view that they would get a better whiskey if it was kept for that period?—I think there is no doubt they would get a better spirit, speaking from a taster's point of view, and it would do away with any colouring of unmatured whiskey which unscrupulous people might do at present, and it might also put the whiskey trade on a very much better footing as far as public safety is concerned, and that would override any objection.

5370. (*Dr. Adeney.*) Who would suffer?—Nobody would suffer.

5371. I thought you said the advantages would counterbalance the objections?—The point was that, of course, the grain whiskey does not take so long to mature as malt, and therefore they might suffer to a certain extent.

5372. (*Mr. Guillemard.*) You said a little time back that patent still whiskey, in your opinion, went on improving, say, up to 10 years or so?—Yes.

5373. While the pot still product went on improving for much longer than that?—Certain of them—some of the bigger whiskies.

5374. What, in your opinion, happens to the patent still whiskey after you have kept it ten years? Does it stay at the degree of excellence to which it has attained, or does it go backwards?—I would not like to generalise on that subject. I have seen samples which have improved up to ten or fifteen years. On the other hand I have seen samples which are apt to get woody, and have the cask flavour.

5375. They have gone back?—They have had the cask flavour. They have not gone back, but they have taken on something which is not good.

5376. Then with regard to labelling. What would your view be if it was suggested that all the different sorts of whiskey must be labelled, that is to say, you must have labels for malt whiskey, pot still whiskey, and patent still whiskey, and grain whiskey. Would you object to that systematic labelling?—I think personally it is entirely unnecessary, but I would not object to it if it was thought necessary to do so as long as every different make had to be labelled, that is to say, if it was a pot still that they were not entitled to sell it as Scotch whiskey without calling it "Pot still whiskey" or "Pot still malt whiskey." The same with grain and malt, and the patent still whiskey—"a blend of malt and a pot still and grain whiskey from a patent still." I think that would be quite fair if it is thought necessary.

5377. Do you think it would be practicable to give the proportions of the blend on the label?—No, I think it would be very unfair to begin with, and I think, secondly, it would be entirely useless.

5378. Why would that be? Is your view that analysis could not detect it?—That is what I mean. I do not see how it could be detected. It would be simply leading unscrupulous people to make false statements which could not be dealt with very well.

5379. You mean that it might create a false security possibly?—That is so. I should like to put in a sketch of an American still. (*Producing sketch.*)

5380. (*Dr. Horace T. Brown.*) Is this a continuous still?—That is what they call a continuous three-chambered still. That is what they use in all American distilleries where they distil the straight whiskey.

5381. They make their straight Bourbon whiskey from maize?—Yes.

5382. Is that still in use in this country?—No. I saw it in use in America, and I got a print of it.

5383. (*Chairman.*) What was it that you wished to establish by this?—With regard to the question of whiskey that that still practically makes very much the same class of whiskey as grain whiskey, and in America it is sold as straight whiskey. I saw a sample running off the still, and if we had not known it I should have thought I was looking at a Scotch grain whiskey. It is in connection with the use of the word "whiskey" for grain in a continuous still that I refer to that.

5384. (*Dr. Cushny.*) Can you explain why the malt distilleries generally work only for six or nine months?—I suppose one reason is that they have not orders which will keep them going for more than six or nine months, and secondly, with regard to the malting of barley, you cannot malt very well in the hot weather, and the water is not so good in summer, and you get a very bad price for the draff. All the cattle are out to grass, and there is no demand for it, and generally it is more expensive to work in the hot weather than in the cold, so it is not so economical.

5385. With regard to the flavour that whiskey gets in casks. How far is it from the cask that the flavour comes do you suppose?—I should say, except with fresh sherry casks and Malaga wine casks, that the flavour does not come from the cask at all.

5386. Would whiskey mature just as well in bottle then?—No. I think that is rather a difficult subject on which not very much is known. The oak cask, to a certain extent, is a porous wood, and I suppose there is a certain amount in the wood itself. There are, however, strong acids in oak casks which may have some influence on the composition of the spirit, but that is a matter which is very little known.

5387. I wanted to get that out from you, because from the paragraph in your *précis* it seemed that you rather neglected the fact of the cask?—It certainly does not take the flavour of the cask, but that is not to say that the wood and the air does not have some effect, but what that effect is I would not like to offer an opinion upon.

5388. Can you distinguish the Irish patent still whiskey from the Scotch patent still whiskey?—I think so.

5389. Several witnesses have told us they are absolutely identical?—The difference is not a very distinct difference, but I bought a business some years ago which had been using Irish grain whiskey, and I got samples of it and tried it in my blends, and I looked at it and I certainly found a difference, and I could not use it.

5390. Was that owing to the water?—It is very difficult to say—I should think it was the water and the still, and particularly the way in which it is distilled. Each distillery has a separate man and a separate system, and all these matters affect it to a certain extent.

5391. (*Dr. Horace T. Brown.*) Though the materials are identical?—Though the materials are identical.

5392. (*Dr. Cushny.*) Was there as much difference as, for example, between Scotch malt and Irish pot still whiskey?—No, not so much.

5393. Another point that has been made by several witnesses is that grain whiskey is used to conceal the use of new malt in a blend. How far is that correct?—I do not think that applies to Scotland at all.

5394. That is purely an Irish question?—That is purely an Irish question. I have never tried it.

5395. How are you going to prevent essences being used if you allow blends at all?—Essences cannot be used in bond because it is against the Excise regulations, which I need not tell you are very strictly carried out. Personally speaking, I never heard of any essences before I came to this Commission

5396. We have had advertisements of all kinds of whiskey essences produced here?—They must keep them in England, because I have never seen one in

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Scotland, and I have been in the business for 20 years.

5397. (*Dr. Horace T. Brown.*) Are you a maker of yeast?—Yes.

5398. I suppose you regard that as an important part of the patent still distiller's business?—Yes, on an average it is.

5399. It materially diminishes the cost of the spirit?—Yes, in an ordinary year it enables us to reduce our cost.

5400. You have spoken about the working of the patent still as compared with the pot still. Can the bye-products of a patent still spirit be increased in the direction of giving the spirit a flavour more nearly resembling that of a pot still whiskey?—It could be done.

5401. Have you ever done it, or have you ever seen it done?—We have reduced our heats a little and our strengths, and, of course, you immediately get a larger percentage of impurities, but to do it properly you would have to fix the plates in your still and take off a certain proportion of each of the different impurities.

5402. You cannot do it by merely removing the position of your spirit plate?—No. You could do it, of course, but it does not give you the same result as the pot still; that is to say, you would get all your impurities extra of a certain description.

5403. But do you think you could produce in a patent still a whiskey resembling the pot still whiskey, even to the peaty flavour?—I am quite sure you could if you wanted to.

5404. You are quite sure you could?—By catching the impurities as they liquify at different temperatures.

5405. You state that stills cannot be heated with peat?—Pot stills cannot be heated with peat anyhow. I do not think they can.

5406. I think I could give you a reference to an old report upon that subject?—I have been told since, in old distilleries they could be, but I do not think you could do it in a modern still, because it is so much larger.

(*Chairman.*) The Commission are much obliged to you for the evidence you have given.

The witness withdrew.

Dr. R. R. Tatlock.

Dr. Robert Rattray Tatlock, called.

5407. (*Dr. Horace T. Brown.*) You are, I believe, an analytical and consulting chemist?—I am.

5408. You have practised in that capacity in Glasgow for a considerable time?—Yes, for the last 40 years.

5409. You are President of the Society of Public Analysts?—I am.

5410. You are a member of the Council of the Institute of Chemistry of Great Britain and Ireland, and a Fellow of the Royal Society of Edinburgh, and a Fellow of the Chemical Society of London?—Yes.

5411. You also, I believe, occupy the position of public analyst for the cities of Glasgow and Perth, the County of Dumbarton, and fourteen burghs in Scotland?—Yes.

5412. You are also official analyst under the Fertilisers and Feeding Stuffs Act for the County of Lanark and Dumbarton?—Yes.

5413. I believe you have had, in the course of your practice, a great deal to do with distillery work?—I have.

5414. Have you been consulted much by the distillers?—Yes.

5415. By the distillers of both malt and grain whiskey?—Yes.

5416. You have been consulted, I suppose, with regard to their products and their processes?—Yes.

5417. In the course of your inquiries have you visited many distilleries in Scotland?—Yes, a good many.

5418. Of both kinds?—Of both kinds.

5419. You have occasionally advised the owners of those distilleries as regards improvements or any difficulties that may have occurred?—Yes.

5420. I believe you have paid considerable attention to the composition and character of whiskies of all kinds?—I have.

5421. Both malt whiskey and patent still whiskey?—Yes.

5422. And you have in the course of your work analysed a large number of Scotch whiskies of both kinds?—I have.

5423. You hand in a tabulated statement giving the composition of a large number of whiskies?—Yes. (*See Appendix G, Table I.*)

5424. We have, as a matter of fact, only just had these put into our hands, so we have not really had time to examine them. You would like possibly to make some remarks on the first tables?—No, nothing very particularly. There are no very great variations between the individual specimens of the Highland whiskies. There are a few of a marked character, but most of them are very similar as regards composition ascertained by analysis.

5425. We have here 31 samples of Highland malt pot still whiskey, nine of Lowland pot still whiskey, and four of Islays pot still whiskey, and two of Campbeltowns pot still whiskey?—Yes.

5426. And two of Irish pot still whiskey?—Yes.

5427. Four of American pot still?—Yes.

5428. And eight of Scotch patent still grain?—Yes.

5429. Have you given any general summary of those in any of your tables?—Yes, Table 2 is a general summary. (*See Appendix G, Table II.*)

5430. Have you any remark to make on those?—Not very particularly. The ethers vary very considerably, but the averages are not widely different.

5431. You give the maxima and the minima?—The maxima, the minima, and the true average. The Americans are rather rich in ethers, but so far as these four samples are concerned they do not seem to be richer in higher alcohols than the Scotch pot still whiskey.

5432. Then for the ethers and volatile acids, aldehydes and furfurals you used, I suppose, the usual methods?—Yes.

5433. May I ask how you determined the higher alcohols?—These are determined by the Allen-Marquardt method, and also by the coloration method as employed by Dr. Teed.

5434. Using the isobutyl standard?—Using the isobutyl standard.

5435. Those are not given here, are they?—They are given on the second page of table 2.

5636. The colorimetric method?—Yes.

5437. Do you find any constant relation between these higher alcohols as determined by the two methods?—No, I find no constant relation.

5438. You cannot use any factor for reducing one from the other?—No, there is no factor possible.

5439. This method of determining the higher alcohols is the one which Dr. Schidrowitz adopted?—Yes, the Allen-Marquardt.

5440. Are your results directly comparable with his?—Yes, they are directly comparable, I believe.

5441. Are they comparable with the results he gave us from his second paper which he read before the Society of Chemical Industry?—Yes, I understand so.

5442. I should like to compare these figures of yours with those given by Dr. Schidrowitz from a large number of samples, about one hundred, I think. Take the Highland malts first. The ethers run with you from 154 down to 45?—Yes.

5443. His figures give from 33 to 185. The higher alcohols of yours run in the Highland malts from 73½ to 190?—Yes.

5444. And the minimum is 73½?—Yes.

5445. Dr. Schidrowitz gives a minimum of 112, and a maximum of 235. Then volatile acids and aldehydes we need not take. Then Lowland malts, how do they run—ethers and higher alcohols?—For ethers the maximum is 85·8, and the minimum is 34·52. The true average is 66·19. The maximum of higher alcohols in the Lowlands was 240·68, and the minimum 103·49.

5446. Dr. Schidrowitz gave for the higher alcohols in the Lowland malts 228 as the maximum, and 82 as the minimum. It comes somewhere near your figures. Then in the Campbeltowns we need only take the ethers and the higher alcohols?—In the Campbeltowns the maximum for ethers is 85·62, and the minimum 61·42.

5447. Dr. Schidrowitz's figures are 140 and 53. Now take the higher alcohols?—The higher alcohols in the Campbeltowns is 206·70.

5448. And the lowest?—139·58.

5449. There is a fair correspondence there. Now take the Islays?—Higher alcohols 161·70.

5450. That is against 200. Then what is the minimum?—130·20.

5451. Dr. Schidrowitz's figure is 155. Now the ethers?—The figure for the ethers in the Islays, taking the maximum is 78·05.

5452. That is against 86?—Then the minimum is 48·31.

5453. That is against 40. Now take the grains?—The ethers 50·90.

5454. That is the maximum?—Yes. Then the minimum is 22·04.

5455. Dr. Schidrowitz's figures run from 55 down to 20 for the ethers. Now take the higher alcohols?—Grains, higher alcohols 68·47.

5456. Is that the highest?—Of the grains, yes.

5457. That goes down to what?—32·47.

5458. Dr. Schidrowitz's figures go from 80 down to 33. Is there much over-lapping in your figures when you come to look at them, taking the Highland malts right down to the grains?—Yes, there is an over-lapping in the individual constituents.

5459. What is the amount of that over-lapping as regards the higher alcohols?—In the Highlands the higher alcohols minimum is 73·51, and in the grains the maximum is 68·47.

5460. There is not quite an over-lapping there?—No, not quite. Those two ingredients come very close together.

5461. (*Dr. Adeney.*) Do you get any over-lapping trying the colorimetric process for the same constituents?—The higher alcohols alone do you mean?

5462.—Yes?—The minimum for the Highlands is 140, and the maximum for the grains is 268.

5463. So you do get an over-lapping there?—You get a great over-lapping there.

5464. (*Dr. Horace T. Brown.*) Do you hold the view that the product of the patent still has a right to be called whiskey?—Yes, I have always held that view.

5465. A right equal to that of the pot still?—A right equal to that of the pot still. They are both whiskey.

5466. May I ask how you came to that conclusion?—Considering the materials from which they were made, and from the use of both during long periods of time, and considering that there is no ingredient in the one that is not in the other. This is a question of proportion and trade custom, and the public having been served with grain whiskey more or less as whiskey for a period almost beyond my memory.

5467. You have always known the patent still spirit as whiskey, have you?—Oh, yes.

5468. It has always been known as whiskey during your time?—I have always known it as whiskey. I have drank it as whiskey, I believe, before the Food and Drugs Act was in existence, and before Dr. Teed was born.

5469. (*Chairman.*) I do not see what Dr. Teed's birth has to do with it?—It is a question of time. He was the first chemist who proposed to make a chemical standard for whiskey, and I say it has been in use as whiskey before he was born, and before the Food and Drugs Act came into existence, so that apart from that the Food and Drugs Act would require to be retrospective.

5470. (*Dr. Horace T. Brown.*) I believe in March, 1898, you were consulted by the local authority of the City of Glasgow with regard to the relative merits of pot still and patent still whiskey?—I was.

5471. And especially as to whether the patent still whiskey contained anything injurious or objectionable in character?—Yes.

5472. And whether it ought to be subject to any prosecution under the Food and Drugs Act if such was the case?—Yes.

5473. Will you kindly tell us what the upshot of that inquiry was?—I wrote to the chief sanitary inspector in detail my views on the subject, and I have an official copy of that report here.

5474. Is it a long report?—It is rather long—four and a-half pages.

5475. Does it contain much with regard to the question of public health?—Yes, but not from the medical point of view.

5476. Would you give us the general result?—The general result was that the bad qualities that are ascribed to what was called grain whiskey or raw grain whiskey did not exist any more than they did in pot still whiskey, and that all the evil effects which we have observed from excessive drinking did not arise from the circumstance that it was patent still whiskey that was drunk and not pot still whiskey.

5477. Was there anything, so far as you know, which threw doubt in the first instance on the wholesome nature of patent still whiskey?—Nothing at all.

5478. What was the cause of the inquiry?—I suppose the chief sanitary inspector for the Corporation of Glasgow was requested by his Health Committee to turn his attention to the subject of whiskey, and ascertain whether anything could be done to prevent the bad effects which are alleged to arise from the use of certain whiskey.

5479. (*Chairman.*) What was the date of your report?—12th March, 1898.

5480. (*Dr. Horace T. Brown.*) Were any further steps taken by the local authorities?—Not by the local authorities, but the Inland Revenue sent an officer to Glasgow to take samples, with the result that they found nothing wrong with the whiskey as a body.

5481. I suppose this led you to think about it and to carry out certain experiments with regard to the action of some of these bye-products?—Yes. I had been consulted, of course, by distillers many long years before that, but I did not take any special steps immediately after this.

5482. You thought there might after all be something in it?—No, I did not think there was anything whatever in it.

5483. At any rate, there was sufficient doubt in your mind to lead you to investigate it?—I made investigations, in view of this case, two years ago.

5484. It was during this case that you made these experiments?—Before the first case came on in the North London Police-court, I made special experiments, physiologically and otherwise, but I had the experience long before that date.

5485. Will you describe to the Commission exactly what those experiments were on yourself?—The physiological experiments were made only two years ago, but my experience of the consumption of Cambus whiskey exclusively dates back for about 25 years. I consumed nothing else for three years. I got in quantities from the distillers, and never drank anything else during those three years. I have got copies of the invoices here of that date.

5486. These particular experiments that you made on yourself were only made two years ago?—Yes.

5487. They had nothing to do with this particular inquiry which was made ten years ago?—No.

5488. Will you kindly explain what those experiments were, and what the idea underlying them was?

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—Having perfect confidence in the innocuousness of the secondary products from both pot still and patent still in quantities which are or ought to be consumed, I prepared the impurities, the secondary products, from three bottles, that is, according to the process described by Dr. Bell in his evidence before the Select Committee. I prepared the secondary products by his method.

5489. That is the ether method?—The chloride of calcium and ether methods. I swallowed the product of three bottles of the pot still in one day, and the next day I swallowed the product of three bottles of the patent still, without the slightest effect.

5490. How did you get that into proper condition for swallowing? You had the residue from the ethers after the ethers were evaporated, how did you redissolve that?—I just added water to it and made it up to 250 cubic centimetres with water and consumed the whole contents.

5491. Do you know what the weight was, approximately, of those bye-products which you got in that way?—They cannot be weighed; they cannot be extracted and present without water. There is always a residue of a few drops of alcohol and some water from the evaporation of the ether, so that they cannot be taken out practically and presented by themselves.

5492. But you took the whole of these bye-products?—The whole of them, mixed with water.

5493. Did they have any effect on you?—None whatever. They could not, from the small proportions in which they existed in both whiskies.

5494. (*Dr. Cushny.*) Did you form any estimate of what there was in each?—In Table 3 I give an analysis of the proportions of each ingredient swallowed and the total. Table 3 gives the quantities and the age of the three bottles of pot still and of the three bottles of patent still, and the quantity of each ingredient swallowed, and the total from the half-gallon of pot still and the same from the half-gallon of patent still. (*See Appendix G, Table III.*)

5495. (*Dr. Horace T. Brown.*) Are these figures worked out from actual weights anywhere on this table?—In the fourth column there is the pot still, and in the eighth column the patent still.

5496. What are the exact figures?—The fourth column is headed "From half-gallon of pot still, in grains." The actual amount of ether swallowed in the half-gallon was 15·97 grains, and the higher alcohols 27·08 grains, and the total 51·08 grains for the pot still.

5497. (*Chairman.*) Have you consumed all these quantities yourself that are mentioned here?—I did, my lord, and should be happy to repeat it, at Somerset House or anywhere else.

(Adjourned for a short time.)

5498. (*Dr. Horace T. Brown.*) Before the adjournment you were describing to us certain experiments which you had made upon yourself by taking a comparatively large amount of the bye-products of certain whiskies?—Yes.

5499. You stated that the physiological effect, as far as you could judge, was absolutely nil?—That is so.

5500. You made some further experiments with regard to the possibility of there being anything of a poisonous nature in the way of volatile products in whiskey?—Yes

5501. Will you please describe those experiments?—I distilled duplicates of the six bottles already referred to in the other experiment, three pot and three patent, bringing over a small fraction of the entire spirit, and I used a freezing mixture round the condenser in order that every possible volatile product could be condensed. I swallowed the contents of these six bottles on successive days, one on each day; on account of the alcohol accompanying the supposed poisonous alkaloid, or aldehyde, I could not take more than one each day, that is on account of the ethylic alcohol present. I took one each day without any effect whatever.

5502. What proportion did your distillate bear to the total amount of liquid which you distilled?—5 per cent. of the distillate in each case.

5503. That, of course, would only bring over with it a certain amount of alcohol, the very volatile products?—Yes, the very volatile products—the strong alcohol.

5504. You have already referred to the analysis of the whiskies on which these experiments were made. They are contained, I think, in Table 3?—Yes.

5505. What is the upshot of all those as regards the physiological effect of the various products?—There was no effect one way or another, which I fully expected because the proportions of these ingredients are so exceedingly small in large doses of whiskey that they cannot possibly have any physiological effect.

5506. (*Chairman.*) The whiskey would have a worse effect?—The ethylic alcohol has the effect, my lord.

5507. (*Dr. Horace T. Brown.*) With regard to the ethers, you state here that Highland whiskey No. 5, which shows 154·16 parts per 100,000 of absolute alcohol, would only contain three-fourths of a grain in a wineglassful of whiskey?—Yes.

5508. Which you say is about 1/25th part of the minimum dose prescribed by the British Pharmacopœia for repeated administration?—That is so; the British Pharmacopœia dose is here.

5509. Are you not dealing with two different classes of substances here? I suppose the British Pharmacopœia refers to ordinary ether?—Acetic ether, which is the chief ether in these whiskies. This is the minimum Pharmacopœia dose of acetic ether.

5510. You are dealing with the so-called esters in the whiskies?—Yes.

5511. I suppose the Pharmacopœia prescription refers to ordinary ether?—No, it refers to acetate of ethyl, which is the chief ether of these whiskies.

5512. What have you to say about the furfural present in some of these whiskies?—It is so exceedingly small that it cannot possibly have any effect in pot or patent.

5513. That furfural, I suppose, was included in your bye-products soluble in ether, on which you experimented?—Yes; it is the one of all products that would remain behind—it is the least volatile.

5514. What is the amount of furfural you found in pot still whiskey?—I found from 1 to 7 parts per 100,000 of the alcohol.

5515. How much of the higher alcohols have you found?—In pot still I have found up to 240 parts per 100,000 of the alcohol.

5516. How does the patent still whiskey compare with that?—Patent still whiskey on an average contains very much less, but they approach each other as I have mentioned before—the pot still and the patent still together.

5517. Would you regard the absence of furfural from the spirit as being indicative of its being a patent still spirit, and not a pot still spirit?—Not in every case, but on the average it is so, because there have been pot stills found with even less than I have found. Dr. Schidrowitz found pot still with no furfural at all.

5518. Do you regard the patent still whiskey or spirit as a silent spirit?—No, it is not a silent spirit.

5519. You regard it as having a distinct flavour?—Yes.

5520. According to your experience, what is the effect of maturing such a patent still whiskey in wood?—It has the effect of what is called ageing it, rendering it mellow and milder. I have drunk new patent still whiskey, and I have drunk patent still whiskey 15 and 20 years old, and have compared the result.

5521. You think a patent still whiskey or spirit is suitable for consumption alone without the addition of any pot still whiskey?—Yes, I have consumed it myself for three years, getting it from the Cambus Distillery to my own house in casks, and have consumed nothing else for three years on end, and I use it still.

5522. You said in your *précis* that for further evidence of the fact that patent still whiskey as made in Scotland is not a silent spirit, you refer to the certificate of a public analyst of note in a prosecution under the Food and Drugs Act?—Yes.

5523. What does that refer to?—To the prosecution at the North London Police Court and Clerkenwell.

5524. What was the coefficient of impurities found in that case?—174. Dr. Teed mentioned that he had got patent stills up to 204, which is over half his standard.

5525. You are aware that the method employed by Dr. Teed was entirely different from the one you have used yourself?—Yes, but I am comparing them both on the basis of his methods.

5526. Your argument is that this patent still whiskey contained about the normal amount of impurities as compared with pot still—that is about one-half?—Yes, about one-half. Of course, it comes and goes. Pot still whiskies are so very variable in composition that you must take them by the averages and compare them.

5527. (*Dr. Adeney.*) What do you mean by taking them by the averages?—I mean if you take an extreme rich pot still whiskey, that is rich in secondary products, and compare it with the patent still whiskey, there will be a great difference between the two, but if you take the average there will just be the average difference.

5528. (*Dr. Horace T. Brown.*) Are you of the opinion that such a standard as laid down by Dr. Teed would condemn many genuine malt pot whiskies?—Yes, it would condemn many of the best Highland pot still whiskies made.

5529. You say it would condemn 15 out of 48 of those which you have examined?—Yes, it would condemn 15 out of 48 pot still whiskies.

5530. Where is that proved in the Tables?—That is in Table 1. The results obtained from that Table No. 1 are got by Dr. Teed's process. There are 15 out of 48. They do not come up to the 380 standard.

5531. You say that 15 out of these 48 are below the 380 standard?—Yes.

5532. Were these done exactly by Dr. Teed's method?—Exactly.

5533. Following out in the minutest detail the instructions?—Yes. I corresponded with Dr. Teed about the process exactly, and found that there had been a misprint in the minutes of the proceedings at the Police Court, which he had not observed, but he corrected it, and gave me the detail.

5534. I suppose on an average patent still whiskey contains a much smaller proportion of secondary products than the pot still?—On an average, yes.

5535. How much less?—It varies from one-half to one-third on an average.

5536. You state that patent still whiskey does not contain anything, as far as is known, that is not present in pot still whiskey?—That is so. I never heard of anything contained in the one that was not also contained in the other.

5537. You mean that the ethers and the acids and the higher alcohols, and so forth, are all qualitatively the same in the two spirits?—Yes, but they do not exist in the same proportions, of course.

5538. But you can find none of the higher alcohols in one which are not present in the other?—No, I never heard of such a thing.

5539. Have you made careful experiments?—No, I have not made careful experiments; there is nothing on record to show that there have been very elaborate kinds of examination to examine the ethers extracted from whiskey. It has been done by Dr. Bell and others to some limited extent, and the ingredients of pot still and patent still whiskey are exactly the same.

5540. I am not aware of anything very definite on that point. If you can give us some reference to works of the sort we shall be glad. I know of the evidence of Dr. Bell before the 1890–91 Commission?—He stated, perhaps you remember, that propyl-alcohol predominated in patent still and amyl-alcohol in pot still whiskey. I can give you the reference. I have a reference here in Nettleton's book on spirits, which is another one, besides the one I have referred to. I am referring to page 405, where he says: "With reference to the above analysis Bell points out (evidence Select Committee on British Spirits) that the percentage of propyl-alcohol is low in fusel oils from pot still distillation." In the book "pot still" is printed "patent still"; but it is obvious that is a misprint and it should be "pot still." Then it goes on: "But the same alcohol is comparatively high in patent still spirit. The average molecular weight of the acids derived from the oxidation of the higher alcohols in patent still spirit is 75 to 80; whereas from pot still spirit the oxidation of the alcohols yields acids of the average molecular weight 88; proving therefore that the alcohols in pot still spirit are higher in the series than those in patent still spirit."

5541. Have you any further reference to that?—Yes, there is a further reference in Dr. Bell's evidence before the Select Committee.

5542. (*Dr. Adeney.*) I can give you the reference to that; it is question 3528. Dr. Bell is being examined by the Chairman, and he is asked, "Let us understand this, for that is a very important difference if it is established. You say that the fusel oil being separated and skimmed off in the patent still, the whiskey or spirit produced does not contain much amylic alcohol, but chiefly propylic?—Yes.

5543. (*Dr. Horace T. Brown.*) I do not know that that is absolutely conclusive. Now we come to the so-called definitions of whiskey. Do you object to definitions of whiskey?—I do not altogether object to definitions. I would rather see limitations with regard to the materials used in the manufacture of the whiskey.

5544. Will you please tell us what those limitations should be according to your ideas?—I have made a note of them here: "Limitations to be applied to every kind of whiskey. Whiskey is the product prepared by the distillation and rectification of the alcoholic liquid which is produced by the fermentation of the saccharine substances resulting from the action of cereal malts on the carbohydrates contained in the cereal grains used as human food. The degree of rectification, or extent of the removal of secondary products must be regulated to suit the public taste and demand, and there can be no standard in this respect, except that the product of the addition of any substance to flavourless or characterless spirit, in order to imitate the natural flavour of whiskey, would not be whiskey. The form or working of the distilling apparatus does not affect the question of whether the product is whiskey or not as long as the above conditions are observed."

5545. You restrict the definition to the products of distillation and rectification of the alcoholic liquid which is produced by the fermentation of the saccharine substances resulting from the action of cereal malts on the carbohydrates contained in the cereal grains used as human food?—Yes.

5546. You would restrict the conversion process of your mash to that produced by ordinary diastase of malted grain?—Yes. The public have had information, rightly or wrongly, that foreign spirits of very bad quality and flavour have been used largely in this country for mixing with pot still whiskey; and as a matter of fact at page 100 of Dr. Bell's evidence before the Select Committee, he gives a list of foreign spirits which he has analysed, and finds up to 1,000 parts of ether per 100,000 of the alcohol, and, of course, one can understand the effect of importing such a spirit here for imitation purposes.

5547. The point I want to bring out is that you would limit the conversion to that produced by the diastase of cereal malts?—Yes.

5548. You would not include any newer processes of spirit making such as have been introduced on the Continent lately?—I am not sure that I know what you refer to.

5549. I refer to the Amylo process for producing spirits?—We do not know that as whiskey.

5550. There is no diastase used there?—Yes; I understand that would be something added to what is silent spirit.

5551. That may or may not be?—What I say is this: there is no objection to adding any flavouring material to whiskey, provided it is whiskey already, but if you add something to silent spirit to make it whiskey then the product is not whiskey. A man may add flavouring matter to whiskey to improve it, as he may think, but it must be whiskey in the first place.

5552. What do you mean by flavouring matter? You would not suggest he should be allowed to use so-called essences?—Not to make whiskey.

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5553. But if it is whiskey, what do you say?—If it is whiskey it requires nothing, but if a man takes a fancy to adding lavender water he may, but then it is not whiskey. I know a man who adds lavender water thinking to improve it, and people put in certain aromatic substances, but then that is not whiskey, unless it has been so previously.

5554. What do you say if they were demanded by the public, and if the public taste demanded it?—Yes, but it must be whiskey in the first place. He must not add anything to make whiskey out of what was not whiskey. We must have whiskey, and then you can add to it what you like, and drink it as you please. True silent spirit is not whiskey, and any addition to true silent spirit would never be whiskey. The whiskey must be made and not doctored from silent spirit.

5555. You would not bar the use of colouring matter?—No; I think the Food and Drugs Acts allow a certain amount of colouring matter to be used.

5556. You would allow the use of maize in the mash along with barley, rye, oats, and so on?—Yes: a fine wholesome maltable grain.

5557. Then you say you are clearly and distinctly of opinion that any attempt to judge of the quality and character of whiskey by chemical analysis as carried out on the lines followed up to the present time must be futile?—Yes; that is my opinion.

5558. You will not go so far as to say that the average patent still whiskey cannot be distinguished from the average pot still whiskey by analysis?—On the average, no. Pot still gives no indication whatever of the materials used in its preparation. Analysis up till now gives no indication, but it simply gives quantities of ether, and quantities of alcohols, and quantities of other things, which do not tell you anything about the sources, so that all spirits are silent as to their source as far as their chemical analyses are concerned.

5559. Would you contend if you had a sample of whiskey of unknown origin that it would be impossible with certainty to say whether it is the product of the pot still or patent still?—No; it might have a composition that would indicate clearly that it was of pot still, or of patent, but when you come to blends there is such a great variation in the composition of pot still whiskies, as compared with patent, that you would never know where you were.

5560. You say that chemical analysis, in your opinion, is of no value in determining the nature of the materials, or the particular cereals used in the grist?—Absolutely none. It is of no value whatever. It is only an inference. There is an inference that if you get a small proportion of secondary product it has been made in a patent still from maize. It might be made from any other grain.

5561. As far as the chemical analysis goes there are very narrow limitations, you think, to the possibilities of determining the origin of any particular spirit?—Very narrow.

5562. That is if you know nothing of its history?—Yes, of an unknown sample, that is so.

5563. You put in some analytical results in which you compare the composition of the rye and Bourbon whiskies with the Highland or Lowland malt?—Yes.

5564. I think the general trend of your evidence is to show that if you only had the analytical data to go on, you would not be able to differentiate these various whiskies?—Yes.

5565. That is the point you wish to bring out?—Yes.

5566. And that analytically you would not be able to differentiate them from brandies?—Yes.

5567. I notice in one of these brandies the fine champagne, 1868, D'Artot Cognac, you find as low as 82 parts of ethers per 100,000?—Yes. That would be passed as a genuine brandy under the standard.

5568. It is just on the limit?—Yes, it is just on the limit, but it would be passed as genuine brandy on the standard that has been set up.

5569. But if that had been 79 it would not have been?—Strictly speaking, it would not.

5570. What is the particular thing that counts in the value of whiskey according to your ideas?—There is the proportion of ethylic alcohol present, and the flavour. If it has a fine and rare flavour like wine it brings much more money than if it has a coarse and harsh flavour for the same strength.

5571. Have you any idea as to what changes take place in a cask of maturing spirits?—Dr. Bell investigated that very thoroughly, and did not find that any changes took place at all, except such as were due to concentration in the bulk in the cask. The Americans have been working upon it for a number of years, and in the last journal of the American Chemical Society there is an article upon the ageing of whiskey during eight years, and they find that, while the higher alcohols have not changed in any way except in a degree due to the concentration of the bulk in the cask, the ethers have increased and the volatile acid has increased.

5572. (*Dr. Adeney.*) Could you give the reference to that paper?—Yes, it is the journal of the American Chemical Society for January, 1908, and the article begins at page 98.

5573. That is the paper by Crampton and Tolman?—Yes.

5574. (*Dr. Horace T. Brown.*) Do you think that the public taste as regards whiskey has altered materially during the last 20 or 30 years?—Yes, it has altered materially, I think.

5575. In what direction?—In the direction of consuming a milder flavoured spirit, just as it has done with beer.

5576. You refer here to certain observations of Dr. Bell on a product obtained by the use of Wallace's patent still?—Yes.

5577. Was that a private communication from Dr. Bell to Mr. Wallace, or is that published?—It is marked private, but it is printed, all the same, for circulation.

5578. Can you give us the reference to that?—I have the circular here.

5579. Is there any communication as to what that still was?—Yes. Nettleton gives an analysis of the Wallace whiskey on page 404, I think it is. In the whiskey from Wallace's still he gives the higher alcohols as ·045.

5580. That is rather high, is it not?—He does not say whether it is in the 100,000 of alcohols, or whether it is in the whiskey as it stands. That would give about ·8 for the 100,000 of alcohol.

5581. What are the conclusions you draw from the certificates of Dr. Bell?—That he approved of a large proportion, from half to two-thirds, of the fusel oil being removed from ordinary pot still whiskey—that it would be a great advancement and a great step forward.

5582. Then you bring in the late Mr. Allen, also?—Yes. He wrote a paper on a process known as Scott's Process, which I happened to know something about at the time. The object of that process was the removing from one-half to two-thirds of the fusel oil, and other compounds; and Mr. Allen certified that that was done to the great advantage of the public. I have his paper here.

5583. I think you can scarcely claim Mr. Allen as wholly and entirely with you on the question of patent still spirit?—Perhaps not; but he certainly certified that that spirit containing only one-half or one-third of the secondary products of ordinary pot still whiskey was a vast improvement as regards the public.

5584. But did he say that patent still spirit was a whiskey?—I really do not remember.

5585. You also refer to certain certificates of Dr. Clark, the public analyst for the City of Glasgow?—Yes.

5586. To what do those refer?—They were certificates certifying that Cambus whiskey is a very fine whiskey, of excellent quality in every respect. I have a copy of his certificate here. He was my partner for 20 years, so that I knew him intimately.

5587. Do you think there is any fundamental difference between the process of distillation by the pot and patent still?—Fundamentally, there is not.

5588. Do you think that the pot still whiskey contains all the secondary products of fermentation?—It only contains a small fraction of them.

5589. So that the pot still really is a fractionating apparatus?—Undoubtedly; that is what it is there for, largely. There is only a very small proportion of the secondary products of the fermentation that go with the whiskey in the case of pot still.

5590. As regards the working of the pot still, you have yourself made direct experiments to show the amount of elimination of the bye-products going on during the process?—Yes.

5591. Will you give us some descriptions of those eliminations, as nearly as you can?—Table No. 4 shows them at a glance. (*See Appendix G, Table IV.*)

5592. I think if you read the opening of that table it will explain exactly what you want?—"The object of making these analyses was to ascertain the respective proportions of bye-products, higher alcohols, ethers, volatile acids, aldehydes, and furfural, carried away in the spirit, the spent wash and the spent lees respectively. For this purpose the whole production of a period is taken, in which 40,000 gallons of fermented wort, or wash, are distilled, yielding of whiskey at 11 O.P. 4,000 gallons (equal to 2,536 gallons of absolute alcohol), 8,000 gallons of spent lees, and 28,000 gallons of spent wash. The following table shows the composition of the three products in grains by weight per 100,000 fluid grains of the products respectively, as well as the total amount of bye-products removed by each of the three."

5593. Will you give us the net result of that?—The net result is that the total secondary products in the spent wash and spent lees together, exclusive of volatile acids, is 47·6—they go away, and the total secondary products in spent wash and spent lees, inclusive of volatile acids, is 76·3. These never see the whiskey at all.

5594. What are the 47·6 and the 76·3 calculated on?—On the whole charge of 40,000 gallons of wash.

5595. What do they represent?—They represent that of the total secondary products present in the wash 47·6 are carried away by the other products of the alcohol, that is the spent wash and the spent lees.

5596. What is the 47·6. Is that the percentage?—Yes, the percentage in the whole 40,000 gallons of wash.

5597. What is the 76·3?—It includes the volatile acids.

5598. But those add to considerably more than 100?—Yes.

5599. Is the 47·6 included in the 76·3?—Yes; in the 76·3 the 47·6 is included. To take it plainly, the 47·6 is really the proportion that goes away in the spent lees and spent wash. The 47·6 is what it would be after you took off the volatile acid.

5600. Is the balance what has gone into the whiskey?—Yes.

5601. That is 23·7?—Yes.

5602. So that you would claim from this that there was a considerable amount of fractional distillation going on?—Yes, there must be. That is the whole object of the pot still, to fractionate.

5603. I see that in the body of your *précis* you have given the percentage of the various bye-products reckoned on the original weight of the whiskey, showing that the Cambus contains something like one-half of the bye-products of the Tobermory?—Yes, it is something like that.

5604. Tobermory is a pot still whiskey?—Yes.

5605. Do you wish to draw attention to certain anomalies met with in the application of the Food and Drugs Acts to which you have referred in your *précis*?—I thought it was an example of action by local authorities in the opposite direction from this. The Distillers' Company, or the seller of the product, are prosecuted for having an article pure, and in the case of sugar they are prosecuted for not having it pure enough. Whiskey, according to the prosecutions in these cases, ought to have contained so much secondary product, that is to say, they would not allow it to be sold if it was pure alcohol or nearly so. In the case of sugar they were prosecuted because these natural secondary products were left in, the pure sugar corresponding to the pure ethylic alcohol.

5606. Is not there underlying that some confusion with regard to the use of the word "impurities"?—It is the word used by the authorities in both these cases. They prosecuted in Edinburgh because the sugar was not pure enough, and for not having the fruit sugar eliminated—the materials of brown sugar were not eliminated, and here they prosecute people because they do eliminate them.

5607. You have certain views with regard to that. You say that if any restrictions or conditions are imposed upon whiskey which are to be based upon chemical analysis, the methods by which such analyses are to be conducted should not be left to the discretion or indiscretion of public analysts?—That is clearly my opinion. I think public analysts have far too much in their discretion.

5608. What is your idea—that there should be some central body to which all these things should be referred?—Yes. There is the Local Government Board and the Board of Agriculture. After taking evidence I think they ought to have power, especially if recommended by a Royal Commission or a Select Committee, after taking evidence, to fix whatever standard they please for foods, and that irresponsible analysts should not be allowed to make standards for themselves on such an important matter.

5609. Then there would be some precedent for that?—Yes, for the authorities appointing standards. There are standards for various things already as for whiskey as regards water, brandy, rum, and gin, and so on, and for margarine as regards the proportion of butter allowed, and for milk, and so on. Butter as regards water only. It must be a genuine butter, but there is a certain amount of water allowed—16 per cent.

5610. Then you state that if patent still whiskey, as made in Scotland, is not whiskey, and pot still whiskey, as made in Scotland, is whiskey, then it follows that no admixture of the two can ever be whiskey, and all blends of the two must be adulterated?—That follows. A mixture with a pure thing of an adulterated thing will never make a thing that is genuine.

5611. But how would that apply if the exact blends were declared?—There is a special ruling for that in the Food and Drugs Act, where the different parts of a food are declared. Coffee and chicory are totally different, but if they are properly declared there is no fraud on the purchaser.

5612. You say if it is decided that patent still spirit shall not be called whiskey, and a blend is made of patent still spirit with pot still whiskey, that blend, under ordinary circumstances, could not be described accurately as Scotch whiskey?—No.

5613. But if that blend were declared as a blend, could it then, in your opinion, be described as Scotch whiskey?—Well, not unless the proportions were given, or at any rate, not because it merely stated that the article was a blend of so much of the one and so much of the other. It does not give the consumer, or the purchaser, the slightest idea of the proportion. It might be 99 of one and 1 of the other, or *vice versâ*; so that it would convey no idea whatever. You cannot label a glass of whiskey, and the label could only be put on the bottles and casks.

5614. I believe you have put in a supplementary *précis*, have you not?—Yes.

5615. I have not had time to look at that, but I will ask you to call our attention to the particular points which you think are of importance in this supplementary *précis*?—You have asked me already about maize. I have said that it is a maltable grain, and that the use of it ought to be allowed. There is the point that the secondary products in all kinds of whiskey, pot and patent, are the more toxic the higher they are, that is, the more carbon they contain in their elementary composition. If that is the case, then if there is anything at all injurious in the whiskey it must belong to the pot and not to the patent. They are in such very small proportions in the whiskies that they cannot do any harm.

5616. The higher alcohols are contained in the pot whiskey?—Yes. Then the next is the same point, that there is no harm in maize because it is used in American whiskey to such a very large extent. Dr. Schidrowitz thinks that the characteristic aroma of American whiskey is derived almost entirely from the charred package in which it is aged. That is referred

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to in the same American journal. The only other point is as to old practice, 100 years back, and as to what was used then. Of course, there was no maize known then in pot still, and necessarily operations were confined to other grains, but the proportions of malted barley seem to have been very small in most cases.

5617. To what date are you referring now?—1828.

5618. The point of that is to show that raw grain was used in those days?—Yes. Comparatively little malt was used in the grist, the point being to be able to distil in a pot still something of the composition of pot still whiskey. I took samples from a bonded warehouse a fortnight ago of whiskey having exactly the composition of pot still whiskey distilled in a patent still from all malt. The composition of that is shown in my Table No. 1. It is Table No. 1, Grain Whiskies No. 7.

5619. No. 7 contains 183 parts of higher alcohol?—Yes, that corresponding to pot still whiskey.

5620. What is the general character of that whiskey?—You would not know it from pot still whiskey. There is a bottle here taken by the Inland Revenue officer at the time. I will hand it in to the Commission.

5621. (*Mr. J. Y. Buchanan.*) What age is that?—The age is on the bottle.

5622. (*Dr. Horace T. Brown.*) Do you know anything of the process by which that was manufactured?—All I know is that it was manufactured from all malt in a patent still. I have a sample here 12 years old. There were some 12,000 gallons in the store when I took it. It has the initials of the Inland Revenue upon it.

5623. This is a pure malt whiskey made in a patent still?—Yes, the point was whether a patent still could make whiskey of the composition of pot still. The one that I have handed in marked 12 years old has been in bond for 12 years. Those samples have not been in a sherry cask at all but just plain wood.

5624. You do not know what alteration was made in the still to produce this?—It was run at a lower strength than usual.

5625. With everything else the same?—I do not know that there was anything else, but there are various ways of doing it. You can put on a little more steam and you get it. It can be got at any moment when it is necessary.

5626. ((*Dr. Adeney.*) In reference to this table No. 4, have you compared those results with the results that Dr. Schidrowitz published in the Journal of the Institute of Brewing?—I do not know if I have compared them with these, but I had some conversation with Dr. Schidrowitz on the subject, and I found that the results corresponded fairly closely with mine. He got rather more secondary products carried away by the spent wash and spent lees than I did.

5627. You showed him this table 4?—Yes.

5628. In your conversations with Dr. Schidrowitz your two observations agreed you think?—Yes.

5629. In your analysis which you have given us, I see you return your higher alcohols as amylic alcohol?—Yes, they are calculated on the basis of amylic; that is the customary way.

5630. You did not determine the total acids?—No, I thought the fixed acids were not of any consequence, as they were not included as secondary products in these prosecutions.

5631. Are Dr. Teed's in the volatile acids?—Yes, I think so.

5632. Can you tell us that for a certainty? In his *précis* he simply notes the acidity. It is important to know that, because unless you are agreed on that point your results, as results, are scarcely comparable?—Quite so. I think he means volatile, because he says "acidity calculated as acetic acid," which is a volatile acid.

5633. With regard to the colorimetric test as carried out by Dr. Teed of the higher alcohols, we had strong expression of opinion from Dr. Schidrowitz that that colorimetric method was not a method of value for a serious examination of spirits. Do you agree with that?—Yes, I agree with that. It may have a purpose to serve, but it is not suitable for basing a prosecution upon under the Food and Drugs Act.

5634. Do you agree with the contention that the Allen-Marquardt system is a good one?—Yes, it is the most suitable we have. It is not a perfect process, but it is used in America and elsewhere.

5635. It is used amongst chemists universally?—Yes, it is used amongst chemists universally and approved.

5636. Is it a reliable method for indicating propylic acids in alcohol?—Well, if there is any carbonic acid given off during oxidation it is a defect. Normal propylic alcohol does not give off carbonic acid in oxidation, consequently it is not defective in that respect.

5637. In the process of separating these higher alcohols is propylic alcohol satisfactorily separated from the ethylic alcohol?—I believe there has been objection taken on the score that it was not completely extracted; but at the same time it is the most perfect process we have for taking off secondary products together.

5638. You have not made any examination as to that point?—No, none at all.

5639. Did I gather aright from the general tenor of your evidence that there is really, so far as public health is concerned, nothing in ageing whisky?—I do not think there is. Really, it is a point that has never been thrashed out. I am not aware of any experiments that have been made in testing the effect on the public health of new as against old spirits of any kind.

5640. In an opinion based on the observations that have been made so far, for instance, Dr. Bell's and your own, the conclusion would be justified that there was really nothing in maturing spirits?—There is something in it as regards the production of a more agreeable flavour, but as regards public health I think there is really nothing to show.

5641. Do you think the evidence is of a sufficiently exact nature to justify any conclusion upon the subject?—No, I do not say that it would justify any conclusion on the subject. I think we have not sufficient opinion as regards the physiological effect of new and old spirits.

5642. The observations which have been made have been very restricted, have they not?—I think so

5643. For instance, in taking old brandies. You have, no doubt, analysed old brandies?—Yes.

5644. You have been struck, no doubt, with the very high amounts of impurities in old brandies?—They would not be different from new. The proportions of higher alcohols do not increase. The ethers may.

5645. A paper was handed in by Dr. Schidrowitz, a reprint from the journal of the Institute of Brewing, and in it he makes this remark: "It is obviously absurd to compare a spirit 50 years old, possessing, say, 600 or 700 parts of secondary products—the greater part of which are obviously due to age, and not to initial quality—with a brandy of the ordinary commercial age—say six to 10 years." Dr. Schidrowitz clearly indicates there, I think, that much of the impurity in the old brandy is the result of changes during keeping?—Unless it is ethers he refers to, they may increase.

5646. Do not acids very largely increase?—Yes.

5647. And even higher alcohols?—No; not higher alcohols.

5648. Can you state that from your own observation?—I cannot say that I can say it from my own observation; but Dr. Bell founded it upon his own observation, and I could never hope to reach Dr. Bell without a vast expenditure of time and labour. The Americans found that they have not increased. I do not want to speak for Dr. Schidrowitz, but I think he must mean ethers, acids and extracts from the cask.

5649. I understand you to point out that the whiskies that Dr. Bell examined for this purpose were not old whiskies as compared with some of the brandies that have been examined?—Perhaps.

5650. Dr. Schidrowitz refers to brandy 50 years old. That is not at all an uncommon age?—Dr. Schidrowitz had not the original sample of 50 years old to compare it with.

5651. But there are analyses of old brandies which show a very remarkably high coefficient of impurities?—At that time there is no doubt there were higher proportions of secondary products in brandy than there are now.

5652. You think it was due to the original quality of the spirit, and not necessary to any ageing?—I think so, in the face of the fact that Dr. Bell found no increase in the higher alcohols in old—or comparatively old—whiskies, compared with new.

5653. Can you tell us the age of the samples of whiskey that he analysed?—I cannot say off hand, without turning up the reference, but if we take the Americans it was eight years old pot still whiskey.

5654. There is so much—what shall I say?—prejudice—I will put it in that way—amongst men as to the value of old spirits as compared with raw. I am concerned to see if there is any solid ground for that prejudice?—All I can say is that taking the secondary products from the half-gallon of pot still and from the half-gallon of patent still, that I have swallowed myself, there was one bottle of quite new whiskey in each of them.

5655. I think you will agree with me that we ought to be extremely careful as to the weight that we put on the evidence which has so far been brought forward?—Yes.

5656. I am not convinced myself that the evidence is complete?—I think it is not complete. I think we have not sufficient information on the subject, as I have said.

5657. (*Mr. J. Y. Buchanan.*) You receive frequently specimens of whiskey for analysis?—Yes.

5658. What are the questions usually put to you to decide?—They are various. Sometimes they imagine a bad flavour in the whiskey, due to aldehydes or ethers. Ethers is the name they use for everything; not the ethers we are talking about, but the first vapours that come over in the still; and very often it is a question of the admixture of pot and patent still.

5659. Mostly they are manufacturing questions that you are asked to decide. They are questions by the manufacturers—the distillers?—Yes, and by the retailers also.

5660. Is it often put to you to detect whether there are injurious or foreign ingredients in the whiskey?—Yes.

5661. That is adulteration?—Yes.

5662. And injurious adulteration?—Yes, I have had that, too.

5663. Even to the extent of poisons?—Yes; I generally drink them if I have a sufficient sample, and if not I send for more.

5664. Whence do you generally obtain the samples of presumably very injurious, or even poisonous whiskies?—From publicans sometimes, who come and say that a customer has complained of the whiskey, and that it made him ill.

5665. Complaining of it being injurious?—Yes; that their customers got sick after it, or something of that sort.

5666. From what kind of public-house would these be?—The ordinary class of public-house.

5667. Not a particularly low class of public-house?—I do not think so. I drink whiskey myself. I have drunk whiskey myself that I have got in 20 of the lowest public-houses in Glasgow without any bad effect at all more than that owing to the ethylic alcohol. I went round at one time with a friend of mine and went into 20 of the lowest public-houses in Glasgow and we bought two gills of whiskey, put it in a bottle, and took it home, and we both consumed it till it was done; and we made some tests upon it.

5668. (*Mr. Guillemard.*) How long ago was that?—I mentioned the other day that it was 20 years ago, but I find now that it was 30 years ago; it was followed by an Inland Revenue examination at the same time—they sent officers to Glasgow. They collected 50 samples of whiskey with the very same result.

5669. (*Mr. J. Y. Buchanan.*) So far as the whiskey was concerned it was wholesome?—Yes. There is a lot of prejudice about it. People drink too much whiskey, which makes them ill, and then they blame the quality.

5670. Your experience is in Glasgow, where there are plenty of low-class public-houses, and a great deal of drinking by people who do not discriminate very much. Your experience is that the whiskey sold in these houses is perfectly wholesome?—Yes, though some of it is very nasty to the taste.

5671. (*Chairman.*) That does not deter you from drinking it for tests?—No.

5672. (*Dr. Horace T. Brown.*) Was the nasty taste owing to the newness?—Yes. In the distillation sometimes the whiskey is spoilt, and rather than re-distil it they sell it and take what they can get for it.

5673. (*Mr. J. Y. Buchanan.*) Would the quantity of that damaged whiskey be very great?—I do not think so. People would not drink it except the very lowest class.

5674. (*Dr. Horace T. Brown.*) Are you referring to the patent whiskey there?—I am referring to whiskies generally of which I do not know the origin.

5675. (*Chairman.*) You could not tell that by the flavour?—No.

5676. Was it all nasty?—There were some nasty ones in the 20 lots that I took.

5677. You could not tell whether it was pot or patent?—I think it was pot still whiskey spoilt in the distillation. There was a nasty rank taste about it.

5678. (*Mr. J. Y. Buchanan.*) When these drinkers find that they have taken too much and find afterwards that it has injurious effects upon them, are they in the habit of blaming the method of distillation?—Not seriously. They tell their wives and families that it was real bad stuff.

5679. Is that generally believed?—I was asked that question particularly by the local authority of Glasgow, and I think in one sentence I answered it as nearly as I could: "To what then are we to attribute the terrible effects of which we are sometimes unwilling witnesses, and to what are we to impute the popular theory that new whiskey, or drugged whiskey, is the cause of these? Well, the effects are due to a variety of causes, such as taking too much, and forgetting how much was taken—to mixing drinks, that is, drinking whiskey and beer promiscuously—to lying about what is or has been drunk—to drinking on an empty stomach, or when the constitution is physiologically in a low state—to personal idiosyncrasies, and—to latent pugnacity."

5679*a*. I suppose one may conclude from that that the person who suffers from taking whiskey would be in the wrong in blaming a distiller, and would be probably right in blaming himself?—Yes, that is the natural tendency of a drinker.

5680. (*Chairman.*) What is that which you quoted from just now?—That is from a letter I wrote to the Chief Sanitary Inspector of Glasgow in reply to his request that I should give him a report upon malt whiskey and raw grain whiskey.

5681. (*Mr. Guillemard.*) That was in 1898?—Yes; it was a report on patent and pot malt and grain whiskey in order to determine whether it was a proper case in which to institute proceedings.

5682. What is the date of that?—The 12th March, 1898.

5683. (*Mr. J. Y. Buchanan.*) Do you know, of your own knowledge, how long patent still whiskey has been drunk in Scotland in the ordinary way?—It is 25 years since I got it by the cask from the Cambus Distillery. I have the invoices here. I drank it for three years on end then.

5684. It has been used much longer than that?—Yes. I drank it myself 40 years ago.

5685. The Coffey Still was invented in 1831?—Yes.

5686. They were putting out patent still whiskey in Scotland before 1840?—I have no doubt.

5687. We had it in evidence that it had been used considerably in Scotland, and is, in point of fact, their favourite spirit in Edinburgh and Glasgow?—I have no doubt of it.

5688. If then it has been used for over 40 years under the name of "whiskey," do you not think that it thereby acquires prescriptive rights to the name?—Yes, I think so, even if it did not exactly deserve

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it. It is like a prescriptive right to pollute a stream, though it is a wrong thing to do; but in this case there is nothing wrong.

5689. It has from that point of view an equal right to the name of "whiskey" with the kind that has existed for longer?—Yes, I think it has a claim both ways.

5690. (*Dr. Cushny.*) I want to ask you a question about those bye-products. What do you say about the flavour of those bye-products?—In the case of old pot still there is a rank, harsh flavour, and in the case of the patent still the flavour is much milder. It follows from the proportions in the two. These samples that I have here represent the total secondary products in one class, the pot still, and in the other class those of the patent.

5691. Did the general flavour of the whiskey remain with the bye-products?—Yes, it was isolated by the absence of the ethylic alcohol.

5692. But you could distinguish between the two sets of bye-products quite easily?—Only as regards intensity. I do not think I could distinguish as regards the quality of the flavour. It was a smaller quantity in the case of the patent still.

5693. You suggest, I think, that silent spirit ought in no case to be used to make whiskey?—Yes, that is my idea; that you must not make whiskey by adding any flavouring matter at all to silent spirit—I mean German spirit, or Russian spirit, or Cologne spirit, or spirits of wine.

5694. How are you going to define silent spirit, or patent spirit?—It is the source of the grist that it is made from. I think the grist ought to be limited.

5695. You can make absolutely silent spirit from a patent spirit, can you not?—Yes, you can make absolutely silent spirit from pot still spirit also.

5696. Why should not the silent spirit be used instead of patent spirit and pot spirit?—My idea was to limit the sources from which whiskey could be made—that is, limit them to cereals, because we have been accustomed to consider whiskey as a product from cereal grains, not something made from sugar, molasses, or roots of any kind.

5697. As far as regards the taste and flavour and chemical analysis goes, you might make a blend of patent spirit?—Chemical analyses are of no use whatever in determining the nature of the ingredients under the Food and Drugs Act.

5698. Or anything else? Suppose you made a blend of Islay whiskey and German spirit, you could not detect that from a blend of patent spirit?—No, not at all. Chemical analysis is quite incompetent to do anything of that kind.

The witness withdrew.

Mr. P. McPhail.

Mr. Peter McPhail, called.

5699. (*Mr. Guillemard.*) I believe you are a wholesale and retail wine and spirit merchant of 45A, Morrison Street, Edinburgh?—Yes.

5700. You have had 44 years in the trade?—Yes.

5701. You have been in business on your own account for 33 years?—Yes.

5702. You do a large business in Edinburgh?—Yes. With your permission I wish to state that I am unable to give the number of customers during the week, because I found it impossible to estimate them.

5703. (*Chairman.*) We have not reached that point yet. Do not jump before you come to the stile.

5704. (*Mr. Guillemard.*) Can you say what your experience has been of the public taste in Scotland—whether there has been any change in the time that you have known it?—There has been a great change in the last 33 years.

5705. In what direction?—The direction of the public taste I have found has inclined towards a more silent whiskey since 33 years ago.

5706. Meaning by a more silent whiskey what?—A blend of patent and pot still whiskey.

5707. How far has that gone? What is the proportion? Taking your own sales, what blends are you selling now?—I sell a blend generally of two-thirds grain and one-third malt—pot still.

5708. You get to an even greater proportion of grain than that sometimes?—Yes, sometimes.

5709. The public taste is definitely in the direction of a demand for that sort of blend?—I find it so.

5710. Do you do your own blending, or get them blended for you?—I do my own blending and bonding.

5711. Do you sell any pure grain whiskey?—No; I do not sell any pure grain whiskey.

5712. Do you sell any pure pot still malt whiskey?—Yes, I do.

5713. Much?—There is very little demand for it. I have it billed in the windows and inside, and there is very little demand for it.

5714. When your customers come in, what do they ask for, as a rule?—As a rule, customers come in and ask for a glass of whiskey, and sometimes for a glass of spirits, meaning the same.

5715. You yourself have, of course, always known that there are two sorts of whiskey?—Yes.

5716. Pot still and patent still?—Yes.

5717. Have you ever considered that one was entitled to the name of Scotch whiskey and the other not?—I always considered both entitled to the name of Scotch whiskey.

5718. Now, to go outside your own experience a little, your principal sale is of blends?—Yes.

5719. And you find that the public demand a blend from you?—Yes.

5720. Do you think that experience is general, taking the public-houses of Edinburgh generally?—Yes, that experience is general.

5721. Are there any public-houses or shops in Edinburgh which, to your knowledge, do confine themselves to pot still alone?—Not one to my own knowledge.

5722. Your view would be that all blends of pot still and patent still may be properly regarded as whiskey?—That is my view.

5723. And if they are made in Scotland they may be regarded as Scotch whiskey?—Yes.

5724. The proportions in the blend really do not affect the matter?—I do not think so.

5725. (*Mr. J. Y. Buchanan.*) You say you have been for 44 years in the trade in Edinburgh?—Yes.

5726. I suppose patent still whiskey has been used during the whole of that time?—Yes; but it was not used in the shop I was in to begin with.

5727. To begin with, was it pure pot still?—Yes, pure pot still.

5728. When did they begin in your shop to use patent still?—I cannot recall the exact time, but it was some time after then.

5729. At first it was in relatively small quantities?—Yes.

5730. How much would you say, 20 per cent.?—Perhaps one-third of the patent and two-thirds of malt.

5731. You have gradually increased that owing to the taste of your customers?—Yes, owing to the taste of my customers.

5732. They prefer a milder whiskey?—Yes, they do.

5733. What is the class of your customers generally—I mean the majority of them?—They are all classes, the working class and the better class.

5734. I suppose most of the trade is on Saturdays?—It is during the whole week, but Saturday is the busiest day.

5735. Have you, during that long time, observed any change in the effect of the drink on the customers which could be attributed to the change of the

character of the spirit?—No, I have never noticed that.

5736. You have not observed, with those who are inclined to exceed, that the effect has been visibly worse or better than it was in your early days?—No, I have not seen any difference. I cannot detect any difference in the effects.

5737. In that respect you think the present usual blend stands about upon the same footing as the original pot still whiskey that you used?—I consider that is so.

5738. Do you think there is any change in the quantity that a customer will drink of the whiskey now from what they used to drink?—I do not think so.

5739. It is regulated mainly by what he has been used to drink?—Yes. There is one thing I am very strongly in favour of, and that is an age limit. I think all whiskey should be kept in bond for two years at least.

5740. Irrespective of whether it is pot still or patent still?—Yes, irrespective of whether it is pot or patent, because I am sure that it would satisfy the customers if they knew that they were supplied with spirits of a certain age.

5741. How long, may I ask, has the whiskey that you supply been kept on an average?—Some of it is kept on an average for ten years, and other kinds, the cheaper kinds, about four or five years.

5742. That is what you sell over the counter when you are being simply asked for a glass of whiskey?—Yes.

5743. That would be on an average four or five years old?—Yes.

5744. What would be the average of the best class?—About ten years.

5745. The majority of the customers—the ordinary customers—will get a whiskey of about four years old?—Yes.

5746. (*Chairman.*) You are your own blender?—Yes, my lord.

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5747. In order to do that you must have two classes of whiskey, I presume, pot still and patent still whiskey?—Yes.

5748. In the first place, are they different in price as invoiced to you?—Yes.

5749. Which is the higher?—The pot still whiskey is higher.

5750. I will not ask you the price of each, but what is the relative degree, the one to the other? How much higher is the pot?—The price of the pot would perhaps be double that of the patent.

5751. You blend as you think fit?—Yes, I do.

5752. And what you offer is dependent on the public taste?—Yes, that is what I consider.

5753. You say the blend is generally two-thirds of patent and one-third of pot?—Yes.

5754. But you vary it?—Yes, I vary it sometimes.

5755. Why do you vary it?—We might use more patent still. We can vary it by using more patent still and less Highland malt, because I consider that Highland malt is heavier and thicker.

5756. But I want to know the reason for the variation. Do you have one proportion of blend one day and another proportion on another day?—We have different blends with varying proportions which are supplied to wholesale customers according to their taste. We do not blend it from day to day.

5757. No, but from time to time?—Yes, because we can use some Lowland malt in the blend.

5758. That is the cheaper kind?—Yes, it is cheaper than Highland malt.

5759. Do you try the public to see how much they will stand?—No, I do not think so.

5760. I mean to say, try them to see how much their taste will allow. I only give you credit for looking after your own interests. I suppose you do that?—Yes, my lord, I do that.

The witness withdrew.

Adjourned to to-morrow, at 12 o'clock.

TWELFTH DAY.

Wednesday, 8th April, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. GEORGE THOMSON, called.

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5761. (*Dr. Adeney.*) You reside, I believe, in Glasgow?—Yes.

5762. What is your address?—708, Pollockshaws Road, Glasgow.

5763. You are a retail wine and spirit merchant?—Yes.

5764. Do you carry on business at Glasgow?—Yes.

5765. How many years have you been in the trade?—I have been 25 years in the trade.

5766. Have you traded on your own account during the whole of that time?—No, I have traded for 14 years of that time on my own account.

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5767. You are now trading on your own account?—Yes.

5768. Can you give us any idea of the extent of your business?—The average is about 400 customers per day.

5769. What class of customers are those?—Just ordinary customers.

5770. Are those customers in whiskey?—They come in both for whiskey and beer and other drinks.

5771. And take it across the counter?—Yes.

5772. What whiskey do you sell?—I sell Cambus whiskey, Glen Burgie, and proprietary blends.

5773. Do you sell pure malt whiskey?—Yes, I sell pure malt whiskey too.

5774. How do you sell these whiskies? If a customer comes to you and asks for a glass of whiskey, what do you supply?—If they ask for a glass of the best, that means 3½d., and that would be a blend, and if they ask for a glass of Cambus that is 3d.

5775. If they want a glass of malt whiskey how do they ask for that?—They ask for a glass of malt.

5776. How much is that?—5d.

5777. From whom do you obtain your spirits?—From the distilleries.

5778. Where do you get your Cambus whiskey from?—From the Distillers' Company.

5779. How is it invoiced to you?—As Cambus whiskey.

5780. What is it known as in the trade?—In the trade it is known as Cambus whiskey.

5781. I see in your *précis* that you call it grain whiskey?—That is so; it is known as grain whiskey.

5782. Do your customers know it as grain whiskey?—Yes.

5783. And they ask for it as grain whiskey?—Yes.

5784. Do they know the difference between grain and malt whiskey?—Yes.

5785. Are they aware that grain whiskey is a patent still whiskey?—I think so.

5786. Are they aware that it is produced from maize?—Yes.

5787. Where do you get your blend from?—I blend it myself.

5788. What do you blend? You need not tell us exactly the quantities?—I blend about 80 per cent. of Cambus to 20 per cent. of malt.

5789. That, I think, you said you sell at 3½d. a glass?—That is so.

5790. That would be ½d. more than the Cambus?—Yes.

5791. Could you tell us the proportionate prices that these three whiskies cost you? I do not wish you to tell us the exact prices unless you wish?—I can tell you if you would like to know. Cambus is invoiced at 1s. 3d. per gallon with a discount, and Glen Burgie at 3s. 7d. per gallon with a discount.

5792. I notice you say you also sell Dewar's, Walker's, and Mitchell's, proprietary blends?—That is so.

5793. Do you sell much of those in proportion to the other whiskies?—No, nothing like it.

5794. Do you sell those by the glass across the counter?—Yes.

5795. I suppose you sell them also in bottle?—Yes, in bottle too.

5796. You have no doubt in your own mind that all these whiskies that you have referred to should be called whiskey?—Undoubtedly, I would say they were all whiskies.

5797. Have you held that opinion for the 25 years that you have been in the trade?—Yes, that is always recognised in the trade that they are that.

5798. That you know from your 25 years' experience?—That is so.

5799. Would you mind telling the Commission about what amount you sell of Cambus whiskey?—I would say I sell about 14 gallons per week of pure Cambus.

5800. What is that in proportion to the malt?—In proportion to pure malt?

5801. Yes?—I sell very little pure malt whiskey because they do not care for it, it is too pronounced.

5802. But you told us that you sold it at 5d. a glass?—That is so, we could not sell it for any less.

5803. Is there much demand for it?—No; there is no demand for malt whiskey.

5804. What is the proportion of the sales of your blend as compared with the Cambus?—It is greater.

5805. (*Mr. J. Y. Buchanan.*) The blend is greater than the Cambus?—Yes.

5806. (*Dr. Adeney.*) Would you give us the proportion? You have given us the figure of 14 gallons per week of pure Cambus?—I would say the blend is about a half more.

5807. That would be 21 gallons per week?—Yes.

5808. What do you charge for proprietary blends?—For Mitchell's it is 8d., and for Walker's and Dewar's it is 10d. per gill.

5809. What would that be per glass?—4d. and 5d.

5810. Those are more expensive than your own blends?—Yes; proprietary blends are always that.

5811. I see in your proof you say you sell half a gallon of pure malt and about the same quantity of proprietary blends per week. Is that so?—It would be something like that.

5812. Have you any sale for whiskey in bottle?—Yes.

5813. How do you sell it? Under what label do you sell it?—All under the one label.

5814. Would you mind mentioning it?—It is "Fine old Scotch whiskey" on each of them.

5815. Do you know what is the age of this whiskey, or the average age of the whiskey that you sell as "Fine old Scotch whiskey"?—The Cambus is about three years old and the Glen Burgie is something like four years old.

5816. And that you sell under the label of "Fine old Scotch whiskey"?—Yes.

5817. What is the minimum age of the whiskey you sell generally?—It is never anything younger than about two years of age.

5818. Does that refer to the Cambus whiskey only, or to the Cambus and the pot still?—To either.

5819. What is the price per bottle of the Cambus whiskey?—2s. 6d.

5820. What is the price of your blend?—3s.

5821. And what is the price of the Glen Burgie malt?—4s.

5822. (*Dr. Horace T. Brown.*) What are the strengths?—20 under proof.

5823. Are they all of the same strength?—Yes; from 20 to 22 under proof.

5824. (*Dr. Adeney.*) How were you employed before you started business on your own account?—I was employed as a salesman.

5825. Under different proprietors?—Yes.

5826. What was your experience in those occupations?—Something similar to what I do myself.

5827. They sold pure grain whiskey and a blend?—Yes; in fact, the blend that I use is one of my former employers'.

5828. In all cases of these blends the larger proportion was grain whiskey?—That is so.

5829. In about the proportions that you have just told us?—Yes.

5830. That was all sold over the counter and bought as Scotch whiskey?—That is so.

5831. Was it known by those customers as a blend?—Yes; because they often asked for "A glass of the blend."

5832. Did they mean by that pot and patent still?—That is so.

5833. (*Mr. J. Y. Buchanan.*) Your place of business is in Pollockshaws, in Glasgow?—No; in the Pollockshaws-road.

5834. Is not that in Pollockshaws?—No; Pollockshaws is a borough.

5835. Is it near the river?—It is about three miles from the Clyde; it is in the Queen's Park district.

5836. I suppose your customers are mostly employed in manufactories?—There are no manufactories out my way; it is a residential district.

5837. Your mentioning Pollockshaws rather misled me as to the character of the neighbourhood. I was under the impression that you lived at Pollockshaws. How would you describe your customers generally?—It is a working district.

5838. Are they all workmen?—Yes.

5839. There is no particular trade there, is there?—It is just the ordinary public-house.

5840. But I mean the trade of the workmen. Is there any particular trade principally represented in the neighbourhood?—No; it is just a mixed class.

5841. Do you notice any difference in the taste of your customers in regard to the trade?—Yes, some prefer Cambus whiskey, and some like the blend.

5842. Do you identify the taste with any particular trade? Have you noticed that men in different trades prefer different kinds of whiskey?—No. I have a gentleman staying in Pollockshields, and he always has Cambus, and never drinks anything else. Even when he goes out fishing he prefers it to a blend or malt.

5843. We had it in evidence that one witness had apparently noticed that workmen in sedentary trades, like tailors and shoemakers, rather prefer the milder whiskey. Have you observed anything of that kind?—No. Take, for instance, that particular gentleman that I have just mentioned; he likes Cambus whiskey better than a blend.

5844. In your experience, which goes over 25 years, have you noticed much change in the character of the whiskey that the customers demand?—No.

5845. When you began, what was the demand?—Just the same as it is to-day.

5846. You used then as much Cambus or patent still whiskey as you do now?—The very same. I do not know that there is a bit of difference.

5847. So that it has been a steady trade during all the time that you have known it?—Yes, I should say so.

5848. I gather from the figures that you have given us that your weekly sale of Cambus pure is 14 gallons, and your blend about 21 gallons?—Yes.

5849. Your blend contains 80 per cent. of Cambus. That would make your weekly sale of Cambus about 31 gallons, including what is in the blend?—Yes.

5850. Of the other whiskey, you would sell at the outside five or six gallons in the week?—Yes.

5851. So that the trade, so far as you are concerned, is principally Cambus or patent still whiskey?—That is so.

5852. And that you consider has been the case at least for the 25 years that you have been engaged in the trade?—That is so.

5853. Then there is another point that I should like to ask you about. As you know, in Scotland we use the word "spirits" quite commonly to mean whiskey?—That is so.

5854. And it is often considered a rather more delicate way of putting it. You ask a person to take a glass of spirits instead of simply whiskey. Is not that the case?—Very often.

5855. There would be no distinction?—No.

5856. Supposing a person asked for a glass of spirits and you gave him a glass of pure pot still malt whiskey, would he complain that you were giving him a thing that you had no right to suppose that he meant that when he used the word "spirits"?—No.

5857. That would be recognised as what he wanted, that if he asked for spirits he meant to get whiskey?—If a customer came in he would say "Give me a best special," or he would say, "Give me a glass of Cambus."

5858. But you would never suppose that he meant by spirits any other spirits than whiskey?—No.

5859. Of course, you cannot remember the time before the patent still whiskey was made?—No.

5860. I suppose the term "spirits" is the older term of the two, "spirits" and "whiskey"?—That is so.

5861. And people, when they could get nothing but pot still whiskey, would ask for spirits?—That is a very common expression in public-houses in Glasgow.

5862. And I fancy in Scotland generally?—Yes.

5863. And as far as my experience goes, and it goes back a long time, the use of the word "spirits" is quite common?—That is so.

5864. It is used very often as a euphemism in order not to use the word "whiskey," which is sometimes considered vulgar?—Very often.

5865. You say that none of your whiskey goes out under three years?—That is so.

5866. Would it pay you, knowing your customers as you do, to supply them with younger whiskey than that?—I do not care for using any younger than that.

5867. Do you think the customers would notice a difference in effect?—I could not say they would; I do not think the general public would know.

5868. They would not know?—I do not think so.

5869. Can you give any idea of the limit of age which would correspond to the knowledge of the public—that is to say, how young would a whiskey have to be before a customer would object to it as being too young?—I would say if it was comparatively new.

5870. But what would you call comparatively new?—Well, say new distilled—say about three months old.

5871. You think they would notice that?—Yes, I think they would.

5872. But when it came to be a year old what do you say?—After a year I do not think they would notice much difference between that and two years old.

5873. But if it were a pot still whiskey or pure malt whiskey without any blend?—It is very pronounced at that time.

5874. Would they call that too young?—I do not think they would care for it. I am speaking of Highland malt unblended.

5875. What would you put as the youngest malt whiskey that they would, if I may say so, spot as being too young?—I would say from two to three years old.

5876. As to patent, would they drink anything under two years?—Yes, I fancy they would. I may say from about nine months to a year.

5877. They would not object to drink a patent still whiskey much younger than a malt whiskey?—No, because it is milder.

5878. Is the effect of age on the malt whiskey to make it milder?—Yes, both go that way.

5879. So that the patent still whiskey approaches the drinkable stage much sooner than the malt whiskey does?—Yes, that is my idea.

5880. Is it the practice of your customers to discriminate?—Yes.

5881. (*Dr. Bradford.*) Have you observed any difference in the effects of the patent still and the pot still on the drinker?—There is very little pot still used singly.

5882. Anyhow you have not noticed any very strikingly bad results from the other?—No.

5883. You are satisfied that the patent still spirit improves and matures by keeping?—Yes; both do that.

5884. You are quite satisfied that the patent still improves by keeping?—That is so.

5885. (*Chairman.*) You told us that you sell the pure, that is unblended Cambus, at 2s. 6d. per bottle?—That is so.

5886. And pure malt at 4s.?—That is so.

5887. Of course, that is a very great difference in price. Could you tell us, taking a quart bottle, what ought to be the differential charges per glass? You know how many glasses a quart bottle would hold?—Yes.

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5888. What ought to be the relative charges if a man goes into a public-house and wants a glass of whiskey—one a glass of Cambus, and the other a glass of pure malt—what ought to be the differential charges?—I charge 3d. for the one, and 5d. for the other, per glass.

5889. The man who charges the same price for both, and happens by accident to charge the higher price for both, would get the best of it?—I do not quite follow you.

5890. You charge 3d. for one, and 5d. for the other?—Yes.

5891. Suppose there is a public-house where they have both classes of whiskey, and a man asks for a glass of whiskey, and the publican gives him the cheaper class, and then charges him the same price as if he were giving him the higher class ——.—We do not do that.

5892. Of course you do not, and I am not saying that you do; but what I am putting to you is that that affords an opportunity for a publican to make a large profit. You will have to say yes to that question in a moment?—I do not quite follow what you mean.

5893. I will put it again. There are two classes of whiskey in a man's house, one that he ought to sell at 3d., and the other that he ought to sell at 5d. A man goes in and says: "Give me a glass of whiskey," and the publican gives him what he likes, and charges him what he likes?—We do not do that.

5894. I am not saying that you do; but that affords a great opportunity for making profit?—But in Scotland when a man comes in for malt whiskey he asks for malt whiskey.

5895. I am putting not what occurs in Scotland, or anywhere else. If a man goes into a public-house and says, "I want a glass of whiskey"?—Then we ask him what class of whiskey he wants.

5896. You may or may not?—But we generally do that.

5897. I am not for the moment referring to you, but I am putting a hypothetical case of what might occur. Do you not think if that was done that it surely ought to be checked in some way?—In my shop we do not do that.

5898. I will not ask you any more. I have been saying that you do not do that; and I was putting it hypothetically?—So I understand, but I do not understand your point.

5899. However, it is immaterial, as I think it speaks for itself.

5900. (*Dr. Adeney.*) Have you any knowledge of the practice in England as to the sale of whiskey?—No.

5901. None whatever?—None whatever.

5902. You cannot tell us whether the public would know as clearly as the Scotch public would know?—No; I would not enter into that at all.

5903. (*Dr. G. S. Buchanan.*) You have no hesitation yourself in telling malt whiskey from grain whiskey?—There is a big difference in taste.

5904. There is no confusion in the trade between grain whiskey and other whiskies?—No.

The witness withdrew.

Mr. J. Yule.

Mr. JOHN YULE, called.

5905. (*Mr. J. Y. Buchanan.*) You are a partner of Messrs. William Yule and Son?—Yes.

5906. They are wholesale grocers and wine merchants, of Kirkcaldy?—Yes.

5907. I think they have been in Kirkcaldy for over 40 years?—Yes.

5908. How long have you been associated with the firm?—For over 18 years, and I have been for eight years a partner.

5909. Did you begin at the beginning?—Yes.

5910. So that you know the business as it is very thoroughly?—Yes; I know it all.

5911. What is the trade that your firm particularly do?—We call on all publicans and licensed grocers, and sell them liquor; we also sell groceries and provisions to grocers; but our principal trade is the liquor trade.

5912. You are wholesale grocers as well?—Yes.

5913. Have you any retail trade?—We have one retail place, too.

5914. That is separate?—Yes.

5915. Is that a public-house?—No.

5916. That is only for groceries?—It is for consumption off the premises only.

5917. You travel amongst your customers?—I am in touch with all my customers, and call upon them regularly.

5918. I suppose the customers do not buy direct from the distillery?—No.

5919. Do they always buy entirely from you?—Not necessarily. They may occasionally buy in other ways, either from the distillers, or the blenders.

5920. Is there anything to prevent them buying direct from the distillers if they choose to?—Nothing as far as I know.

5921. Do you believe that you supply to those customers the greater part of the whiskey that they sell?—I would scarcely say we get the greater part of the trade in all cases. Some of them give us the bulk of the trade, and others give us just a share with other wine merchants who call.

5922. They are perfectly free?—Entirely free.

5923. And they give you their custom if they are satisfied with the article you supply and the price you charge?—Yes; that is the only reason they deal with us.

5924. So that there is perfect freedom of trade between you?—Yes; entire freedom.

5925. What whiskies do you supply yourself with, in order to supply your customers?—We handle six to a dozen Highland malts, two or three Lowland malts, and sometimes five or six grain whiskies.

5926. I see that you name in your *précis* the grain whiskies Cameron Bridge, North British, Cambus, and Caledonian?—Yes.

5927. Which of these are made in Fife?—Cameron Bridge.

5928. Cambus?—No; that is made up at Alloa, in Clackmannanshire.

5929. That is not very far from Fife?—Not very far from Fife.

5930. (*Chairman.*) Is Cambus near Alloa?—Yes.

5931. (*Mr. J. Y. Buchanan.*) What kind of proportion of patent still whiskey and malt whiskey do you handle in your trade?—Do you mean in my blends?

5932. In your supply. You buy whiskey and supply whiskey to publicans?—Yes.

5933. What proportion—if you feel inclined please tell us—does the malt whiskey bear to the grain or patent still?—I would say 10 per cent. only.

5934. And 90 per cent. of grain?—Yes.

5935. Do the people in Fife and that district have a preference for one kind of whiskey over the other?—They have a preference for either grain whiskey, or a blend largely composed of grain. They like it very mild, in fact.

5936. Do they prefer much of the pure malt?—Very seldom.

5937. Do you think there is a dislike to it?—Yes.

5938. Do you attribute that in any way to their occupation?—Not in the least.

5939. Do you suppose that it has to do with the great amount of patent still whiskey being produced in the neighbourhood?—We have three malt distilleries in Fife, and only one grain distillery.

5940. What is the proportion?—I would say the grain distillery turns out a long way more than the malts put together do.

5941. What is the name of the malt distilleries?—Burntisland, Auchtertool, and Auchtermuchty.

5942. Are they all well known?—Yes; they are all old-established and well-known distilleries.

5943. And have a considerable circulation?—Yes; there are none of them have big out-puts; but still, they are similar to what you find in the Glen Livet district.

5944. You tell us that 19 out of 20 sell pure grain whiskey?—They all keep it, and sell blends largely composed of grain whiskey.

5945. Do your customers simply ask for whiskey, generally?—Do you mean the retail customers?

5946. Yes?—We do not sell to the public.

5947. You do not sell retail; but do they usually ask for whiskey?—Yes.

5948. Or spirits?—No; it is usually, or always, whiskey in the trade.

5949. In the trade; but I am asking you as to the people?—You very seldom hear them ask for spirits now, unless it is some old person.

5950. Asking for spirits is going out?—Yes; nowadays it is whiskey that is asked for.

5951. You are aware that at one time it was very common?—Yes, with oldish people.

5952. In your trade they specify whiskey when they are asking you for patent still whiskey?—Decidedly.

5953. In supplying patent still to a customer the customer demands whiskey, and not spirit?—They never ask for patent still whiskey. I do not think they know the name of "patent still."

5954. (*Chairman.*) If the customer asked for whiskey, does that mean patent whiskey or pot whiskey?—If they ask for whiskey we give them either blend, or a grain whiskey.

5955. Why do you not give them pot whiskey?—Because I know it would not please them.

5956. And it is a little more expensive?—It is not for that reason, because we get grain whiskies as expensive as pot whiskies.

5957. But, taking the average, pot whiskey is more expensive?—A little more expensive, perhaps; but we want to retain their custom, and give them the whiskey they prefer.

5958. (*Mr. J. Y. Buchanan.*) When they ask for whiskey in the trade, you would supply either grain whiskey or your blend?—We would give them a blend, as a rule.

5959. How much would that contain of grain, as a rule?—The blend we sell principally is about one part of malt to seven of patent. That is the blend we do the largest trade in.

5960. In your *précis* you say that your blends vary up to 90 per cent. and 95 per cent. of grain, and some blends are 60 per cent. to 70 per cent. of malt and other blends?—Yes.

5961. Is there much of that sold?—No; the customers prefer the milder blends.

5962. Do you export any whiskey—for instance, to England?—Yes; a little to London.

5963. Is the principal part of your business in Fife?—Yes.

5964. How long do you think you require to keep the grain whiskey—the patent still whiskey—before you could use it to supply to your customers?—I believe in grain whiskey being at least two years old.

5965. And the malt whiskey how long?—Some of them require a good long time. I do not think there are many malts that are fit for drinking under five years—at least, Highland malts.

5966. How much does that add to the price of the whiskey, comparatively?—Just now it does not add very much, because you can buy Highland malts pretty cheap with age on them.

5967. That is because they were over-supplied some time ago, when the boom was on?—Yes; and because the demand is not very large for the malts. You can buy five-year-old Highland malts almost at the same price as new in the open market just now.

5968. That is an accidental state of affairs?—It has been working up for a year or two.

5969. Do you expect that to work itself off in time?—I hope so.

5970. (*Mr. Guillemard.*) Is that from overstocking?—Yes, to a certain extent, and because the demand has gone off for these whiskies.

5971. (*Mr. J. Y. Buchanan.*) Is there the same overstocking in grain whiskey?—There is an overstocking of certain years away back in 1898 and 1899, but when you come past 1901 there are not such big stocks.

5972. I suppose the old grain whiskies at present are pretty cheap?—Old grain whiskies have risen a good deal in value, and you cannot buy them on the same basis as you can buy Highland malts. You have to pay a considerable advance to get them.

5973. I suppose it is expected that they will go off quicker than the malts?—What do you mean by "go off"?

5974. That the supply of the old grain whiskey, which is due to the over-production of a matter of 10 years ago, during the boom, will find a market sooner than the old Highland malts?—I think so.

5975. That you attribute to the taste of the people?—I do.

5976. (*Dr. Cushny.*) When a customer comes in and asks for a glass of whiskey do you give him grain?—We do not sell for consumption on the premises in that way.

5977. You sell to retailers?—Yes, in bottles for carrying away.

5978. (*Dr. Bradford.*) You said that the bulk of publicans in Fife sell pure grain whiskey?—They all get it.

5979. And the major sale is in that? That is what they sell principally?—I am quite certain the major sale is in grain whiskey or grain with a very little malt in it.

5980. Do you think that is peculiar to Fife, or do you think it is general in Scotland?—If you go up to some of the Highland districts near the Highland distilleries they ask for the local whiskey, but I think the tendency in Scotland is working towards that. I think the blending has been carried to such a good state that the public prefer blends.

5981. You do not think that Fifeshire is at all exceptional?—I would say that Fifeshire, perhaps, is as much in favour of grain whiskies as any county. I would not say it is an average county, but I would say, perhaps, that it is rather more in favour of grain.

5982. (*Dr. Cushny.*) When another whiskey than this blend is wanted, what is asked for? Is it asked for as whiskey?—It is always asked for as whiskey.

5983. How do you distinguish between the two?—Some of them ask for Highland whiskey, and in that case we give them a blend composed largely of malts.

5984. But you never give them a pure malt?—Not unless they distinctly ask for a pure malt, which is a very rare occurrence.

5985. (*Dr. Bradford.*) You would not give them a pure malt if they asked for a Highland whiskey?—No, we would give them our Highland blend.

5986. (*Dr. Horace T. Brown.*) You say there is a surplus stock at the present time of Highland malts. Is that true, also, of Lowland malts?—Yes.

5987. Do you use Lowland malts?—We do.

5988. Can you tell me what is the present difference in price between a patent whiskey at two years old and a Lowland malt, say, at five years old?—You pay for patent whiskey, Cameron Bridge or Cambus, just now, between two and three years old, about 1s. 10d. a gallon.

5989. That is at proof?—At proof.

5990. What do you pay for the Lowland malt at five years old?—Do you mean at five years old or at

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the same age? The grain whiskey that I quoted to you was between two and three years old. Do you wish the Lowland malt at five years old or at two or three years old.

5991. I want you to give it to me at five years old. That is the period at which you prefer to use it?—Yes. I would say a Lowland malt about five years old you might buy at about 2s. 6d. to 3s.

5992. Also at proof?—Yes, also at proof.

5993. (*Dr. G. S. Buchanan.*) It is not uncommon in Scotland to drink whiskey neat, is it?—It is done still, but not so much, I think, now.

5994. What kind of whiskey does the neat whiskey drinker generally drink?—I really could not say. I do not see much of it done.

5995. Will you just elaborate a little your objection to a new patent still whiskey. You do not personally like a new whiskey?—No. With time it mellows down a good deal, it matures and gets softer.

5996. The new whiskey is harsh?—Yes.

5997. Harsh to the taste?—I would say it is sharper.

5998. More pungent?—Yes.

5999. Are there any other objections to it? Suppose you were trying to formulate your objections and put down what you dislike about new patent still whiskey, what would you say?—I think I can sum it up very much by saying that an old whiskey is mellower, more delicate in flavour, and softer.

6000. It is of much better value?—I think so distinctly.

6001. Can you say anything about its intoxicating effects or its irritating effects? Do you ever hear that new whiskey makes people heavy or irritable?—I think it depends greatly on the condition of the drinker. If a man is in good condition I would say that he could stand a very much rougher whiskey than otherwise.

6002. You told us about the old grain whiskies being at the present time very high in price. Is not one reason for that that at one time some years ago it was not thought worth while to stock grain whiskies?—I do not know. We have always maintained our stock and we have never departed from the policy of keeping so many years working stock.

6003. You spoke of the preference of the public in Fife for very mild whiskey—grain whiskey. You ordinarily describe grain whiskey as a mild whiskey, do you not?—Yes.

6004. That is the cheapest whiskey?—Well, you pay as high a price for certain grains. We work the older grains at as much as we would pay for old Highland malts.

6005. But I mean the whiskey that you have a large sale of among the working classes?—That certainly works out cheaper than if we gave them malt, and we would consider it equally good.

6006. Do you think they can drink it with less water?—No, I do not think so.

6007. Does the sale of grain whiskey under those conditions pay you better than the blends?—No. Selling to the trade we work on a certain percentage of profit to carry on our business, and we put the same percentage of profit on in selling a blend as we would in selling a grain. The same thing applies to selling a malt.

6008. With regard to those blends containing one-seventh of pot still whiskey, do you consider that the one-seventh adds materially to the flavour of the whiskey or alters the character of a whiskey very much?—Yes, it gives it an individuality of its own and makes it distinct from other dealers' blends.

6009. And it enables you to charge a higher price for it?—It costs us more and we charge a shade more proportionately.

6010. (*Dr. Adeney.*) You said just now that as far as the effect of new whiskey on the consumer was concerned, it depended very much on the condition of the consumer?—Yes.

6011. In other words he must be in very good health to stand it. Do I understand that that is a fair inference from your answer?—I think if a consumer was not in good condition and was drinking a new malt whiskey the chances are it would sicken him and upset him.

6012. What do you mean by new whiskey?—Raw.

6013. Supposing a doctor asked you to supply a patient of his with whiskey, what would you supply?—I would give him a blend.

6014. Would you take any care as to the age of the constituents of the blend?—All doctors when they recommend whiskey in our district tell their buyer to be sure to get it old. They say: "Go where you can rely upon getting it old." The public are naturally led to think that old whiskey is better than new. If a customer came and said that he wanted a special whiskey, and that the doctor had recommended him to get something old we would give him something old, and charge him a little more for it.

6015. Do you think yourself there is anything in aged whiskey?—I have heard it so often that I naturally believe it.

6016. Do you believe in your own mind that you could detect the difference?—Yes, I would almost say that I could tell the difference between an old whiskey and a new whiskey if I saw them.

6017. Could you tell from its effect upon yourself?—I have never experimented with new whiskey.

6018. You always drink old whiskey?—I prefer to do so.

6019. You gave Dr. Brown a price for patent still of 1s. 10d. a gallon, I think, and I think you said that that was two or three years old?—Yes, that is buying a big parcel. Small buyers could not get it at that price.

6020. And for Lowland malt I think you said of five years old the price would be 2s. 8d.?—Yes, from 2s. 6d. to 3s.

6021. Would that be the highest quality of Lowland malt?—Yes.

6022. You also told us that there were some Highland malts which you could get cheaper than some of the older grain whiskey at the present moment?—That is so.

6023. Do you refer to the best qualities of Highland malts?—There are one or two Highland malts that always get a good price. They have got a name where people are asked for pure pot still malt whiskey, and the others run on these names. These that I am speaking of can command a bigger price.

6024. You have no knowledge of Irish whiskey?—No, I scarcely handle it.

6025. (*Chairman.*) Of course, you as a supplier to the retailer do not come immediately in contact with the public taste and the public demand?—No.

6026. Do the purchasers from you, that is, the retailers, tell you what class of blend they require, or do they leave that to you?—If the retailer is a new man to the trade, a new man starting in business, he might leave it to me; and another customer again would say: "Let me see a few of your samples; show me what you are offering"; and we would supply a few samples and blends, and if one appealed to him he would choose it.

6027. After a time the retailer begins to know what his customers want?—Yes. I know pretty well myself what they want in the district.

6028. In the district of Fife?—Yes.

6029. You consult with him as to the best blend to supply?—Yes.

6030. Then, of course, he would agree or differ according to his knowledge?—That is so.

6031. What is the greatest amount you supply of any particular blend? Which is the most popular of your blends—I mean to say, what is the proportion of them?—I would say the one I mentioned of 1 to 7.

6032. That is the general one?—Yes, the principal one.

6033. Has there been any alteration, do you think, of late years in the public taste as regards a softer whiskey, or a more pungent whiskey?—I think the tendency is quite towards a softer whiskey.

6034. That has been going on, has it?—Yes.

6035. You could only produce that, I suppose, by supplying patent still whiskey for the purpose of blending?—Yes. By using patent still whiskey you

can give a softer Highland whiskey—you can afford to get an older Highland whiskey, one which is softer than a new one.

6036. I am putting this question hypothetically to you. Supposing you were told to operate upon a pot still whiskey, could you produce the milder whiskey without blending?—I am not a distiller, my lord.

6037. But you have great experience in the blending of whiskey?—Yes, but I could not answer that question.

The witness withdrew.

Mr. Alfred Edwin Harris, called.

6038. (*Dr. G. S. Buchanan.*) You are the Medical Officer of Health for the Metropolitan Borough of Islington?—Yes. I have been Medical Officer of Health for the last 16 years, and prior to that I was Medical Officer of Health to the County Borough of Sunderland for 11 years; so that altogether I have been a Medical Officer of Health for 27 years.

6039. Islington is the most populous borough in London, I think?—Yes, it contains 340,000 people.

6040. What has been your relation with the administration of the Foods and Drugs Acts in those districts?—It has been my duty during the time I have been Medical Officer of Health to direct the samples that were to be taken for analysis by the inspectors under those Acts, so that it was not left to the inspectors to take such samples as they liked, but at the same time they were left the discretion as to where they were to purchase them.

6041. That is not universal, but it is generally a very convenient arrangement?—Yes.

6042. The Medical Officer of Health is an officer who has power to take samples?—Yes.

6043. He is also the officer who is responsible for the sanitary inspectors who, in a borough, are the inspectors who customarily take samples, and these inspectors being in his department, he naturally becomes the administrative officer who is responsible for advising as to these Acts, notwithstanding the fact that in many cases the questions concerned are not directly public health questions?—That is so.

6044. You mention in your *précis* the classes of offences which are dealt with under the Acts?—Yes. There are four classes of offences; first, the addition of injurious ingredients to food, such as sulphate of copper to peas and other tinned vegetables; secondly, the addition of ingredients to food which fraudulently increases its bulk, such as the addition of water to milk; thirdly, the substitution of one article for another, such as margarine for butter, or beetroot sugar, known in the grocery trade as yellow crystals, for Demerara sugar; fourthly, and this seems a very curious phase in the law, the selling of a better article than that demanded for an inferior one, namely, the sale of margarine containing more than 10 per cent. of butter for margarine as enacted by the Act of 1889, Section 8.

6045. But that is a single instance which is quite exceptional. The object of that case is not so much to prevent the sale of a better article than that demanded, as to keep the articles distinct?—Yes, possibly to draw a broad line between butter and margarine. I think that it is done in the farming interest, a sort of protection, I think.

6046. In Islington you have enforced the adulteration Acts rather energetically, have you not?—Yes.

6047. And especially when your last Council was in office?—Yes, especially during the last Council.

6048. You mention that a good deal of work has been done in connection with milk in Islington for which you may take special credit, and I think that may be conceded. Then, with regard to the brandy, which perhaps concerns us more closely?—We took proceedings respecting the sales of spurious brandy in 1904, and in these we were successful. I think these prosecutions may safely be said to have led up to the whiskey prosecutions, because in dealing with the brandy prosecutions we found that grain spirit—silent spirit—was used to adulterate brandy, and also whiskey and rum.

6049. The brandy prosecutions I think you refer to later on in your *précis*, do you not?—Yes.

6050. You might tell us here whether, in the brandy prosecutions, it was admitted or proved to be grain spirit that was added to the brandy?—It was silent spirit, at all events, but I am not prepared to say at the moment that it was grain spirit. I do not think at that moment we were thinking very much of the difference that has been made since between silent spirit and patent still spirit.

6051. You did not realise that it might have been whiskey?—I do not think we thought that those fine distinctions would ultimately be made, or at all events they were not made in the proceedings before the 1890 and 1891 Committee.

6052-3. You have given us, in your *précis*, some of the reasons which induced you to advise your Council on the subject of the whiskey prosecutions, and which led your Council to adopt your advice. That would be in 1905, would it not?—Yes.

6054. What you are going to tell us, I take it, represents the processes that you went through in 1905?—Yes.

6055. Some of them, of course, are now familiar to the Commission, and some perhaps you yourself would modify if you had heard the recent evidence here, but I think we take them on that basis briefly. Your first point I notice is as regards the opinion of the members of the Council, or the desire of the members of the Council that whiskey should be examined and sampled?—Yes. There was a considerable labour element on the borough council at that time, and they frequently complained to me that the whiskey sold to the labouring classes in London was poison; that means that it was very bad, that its effect was maddening, and caused much drunkenness, and they asked that, if possible, something should be done to stop its sale. Just about the time that they had been urging me in this way it came to my knowledge that so-called whiskey was being offered to publicans in the Borough of Islington at 10d. per gallon; consequently it seemed not improbable that the statements made to me were true, and that the sale of such spirits of that class might be prejudicial to the public health of the borough. I was also informed by one of my inspectors that some time previous to this he was present in a public-house in Islington when a traveller called on the landlord and offered him a German spirit at 10d. a gallon, and at the same time he offered to sell him certain chemical colouring matter and flavourings to be added to the spirit so that he might sell it either as Scotch whiskey or Irish whiskey as required.

6056. Have you any reason to suppose that German spirit, as such, would be any worse, so far as public health is concerned, than other forms of alcohol?—I do not think there is any proof that German spirit, as a spirit, is any worse than other rectified spirit. German spirit is largely used in this country in its pure rectified state.

6057. Then the brandy prosecutions had some influence on your action in the case as to whiskey, had they not?—Yes. During the brandy prosecutions I had to read the evidence and report of the Select Committee of 1891 on British and Foreign Spirits, and there I gathered that patent grain spirit was used to adulterate brandy, whiskey and rum, and it seemed to me that a spirit could not change its character when it was added to these three different things; that it could not become rum when it was put into rum, that it could not become brandy when it was put into brandy, and it could not become whiskey when it was put into whiskey.

6058. And you understood at that time, at any rate, that the spirit that was used was practically identical for all these purposes?—Yes, for all these purposes.

6059. You at that time looked at the advertisements in the trade journals?—Yes.

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6060. In order to inform yourself?—Yes; and I noticed there was one particularly, which appeared regularly from the Distillers' Company of Edinburgh, who are the largest distillers of patent still grain spirits in the kingdom, and who practically control the trade, as I understand. I think that came out very forcibly in the evidence at the trials at North London and Clerkenwell.

6061. They differentiated between whiskey and patent spirit?—Yes; they differentiated between whiskey and patent spirit.

6062. I think you forwarded to us a copy of the advertisement?—Yes. The advertisement has already been alluded to, by Mr. Bramall, I think. But I would like to emphasise this advertisement, because it undoubtedly had a very considerable influence on my mind, and, I think, on Mr. Bramall's mind, in instituting these proceedings. I do not say that it was altogether the cause, but it was one of the causes, decidedly. Here we get the largest distilling company in the kingdom advertising for years in the wine and spirit trade journals that they were distillers of patent grain spirit at eight different distilleries in Scotland and in Ireland. They, having drawn attention to the fact, go on to call attention to the fact that they are also distillers of Scotch pot still whiskey, and that they are distillers at certain places. They are described as distillers of Scotch pot still whiskey at two distilleries; then, apparently, they appear as distillers of Scotch malt whiskey, and then they are described as distillers of another whiskey at West Lothian. Then there is another distillery where they distil the finest Highland malt whiskey, and then there is finally an Irish whiskey which they distil, as to which they say they distil the finest Dublin whiskey at Phœnix Park Distillery. It seemed to me and others who had seen these advertisements that there was a strong dividing line between the two spirits. Here the people who made this spirit described it as a grain spirit, and differentiated very strongly between it and whiskey, which they also manufactured. I would like to put in that advertisement. I might say—as it might lead the Commission to inquire into it—that since then I have seen some advertisements in the "Diary of the Chemist and Druggist" for 1906, and that I notice in these advertisements that some distillers at Chelsea, who are methylators, profess to supply Red Cross whiskey, Red Cross Scotch whiskey and Red Cross Irish whiskey. Then there is an advertisement of another methylated spirit distiller at Manchester who again professes to supply pure old liqueur Scotch whiskey.

6063. You hand in those advertisements for whatever information they will give us?—Yes. I hand them in because they decidedly seem to point to the fact that these people who make spirits of some kind in England are also makers of whiskey, which they are selling as either Scotch whiskey or as Irish whiskey, and at all events it is a matter well worthy the attention of the Commission, and possibly worthy of inquiry.

6064. You put these advertisements forward on that basis?—Yes; I put them forward on that basis. I know nothing about them. (*The advertisements were handed in to the Commission.*)

6065. If, in fact, there was not much difference between the products of the patent still at such distilleries as you mention and the products of the patent still distilleries in Scotland and Ireland, and such patent still spirit in any case was blended or mixed with the same amount of pot still spirit, you would get an identical article?—Certainly you would get an identical article, and the claim of the Scotch grain distillers to having their whiskey called Scotch whiskey, I think, would very considerably fail.

6066. (*Chairman.*) What is the date of these advertisements?—The advertisement that your Lordship has is a subsequent one. It was admitted in evidence that it had been running on for ten years, and a very curious circumstance arose in Court in connection with it.

6067. The advertisement had been running on for ten years before the hearing of the trial at Islington? Yes. It was admitted that the advertisement had been running on for ten years, and a very curious circumstance arose with respect to it. Mr. Wallace, of the Distillers' Company, was cross-examined on that advertisement because he would not admit that grain spirit was not whiskey. It was pointed out to him that on their own showing they differentiated between them; that advertisement was shown to him, and the only explanation he could give of that advertisement having been allowed to be put into the paper was that it was owing to the mistake of a clerk. Of course the explanation seemed too absurd that the reason why an advertisement like that had been running for so long was through the mistake of a clerk.

6068. We have the proceedings before us?—Yes, I looked that up.

6069. We will not trouble you to go over it again?—I have a copy of all the evidence.

6070. So have we, and therefore we will not trouble you to go into it.

6071. (*Dr. G. S. Buchanan.*) You refer also to the fact that there was some evidence given by Mr. J. P. Currie, who appeared on behalf of the London distillers before the Select Committee, and that his evidence was also an important factor in deciding you to advise your Council to come to the conclusion to take these proceedings?—Yes.

6072. The evidence is available to us?—Yes. It is from 2819 to 2829 of the 1891 Report.

6073. You make a further reference on page 8 of your *précis* to this Report of the Select Committee with regard to the use of the word "blending"?—Yes. I must confess that until the whiskey trial the fact that the word "blending" was used to mean the mixing of two different spirits was new to me, because I, like everybody else, I think, concerned in the trial, always thought that blending meant the mixing of two similar spirits such as two different ports or two different things of the same denomination.

6074. (*Mr. Guillemard.*) But still the Committee of 1890-1 took a different view?—I do not recollect now. I had always known from my youth, of course, that as regards whiskey the blending of whiskey meant the blending of pot still spirits as I had known them in the South of Ireland, and I had seen a good deal of blending at that time.

6075. Do you take the line, for, if so, it would be well to get it direct, that the description in the 1890-1 Committee was not justified, or is it merely that it disagrees with the view you held previously?—So far as my knowledge went of the South of Ireland I did not agree with it.

6076. You think this is a wrong statement?—I think it is an incorrect statement; I will not say it is a wrong statement. That was from my own knowledge of what went on in the South of Ireland.

6077. (*Dr. G. S. Buchanan.*) Your view is that you do not consider that a spirit being made by a different process and from an entirely different grain, that is to say, maize, as being practically flavourless, could be either Scotch or Irish whiskey?—That is so, and I thought particularly so, as London spirits seemed to me to be very much the same as the Scotch and Irish grain spirit so far as I could ascertain.

6078. And also as it could be distilled in other parts of England?—Yes, and in the United States, and in Europe.

6079. Then you made some inquiries as to price, did you not?—Yes; I ascertained that the cost of the two spirits was very different, that of the patent still spirits being about 1s. 3d. per proof gallon, while absolutely new pot still cost from 2s. 4d. to 4s. and upwards at proof; 2s. 4d. is the lowest I could possibly ascertain. I have looked out these prices very carefully.

6080. You considered from those prices that there was a direct incentive to mix the cheaper spirit with the dearer spirit?—That is so, and I know from my knowledge in dealing with foods generally that when a mixture is palmed off on the public it is always found that the article used as an adulterant is cheaper than the article that is to be adulterated. In fact, in the trade you will find here they speak of cheapeners, and this has latterly been very much so in the case of jams, where they have been using cheap articles instead of sugar.

6081. That is not an uncommon thing under the Food and Drugs Act in your experience, is it?—No, it is a very usual experience.

6082. (*Mr. J. Y. Buchanan.*) Before making examinations did you expect to find the reverse?—We never know. We take samples everywhere.

6083. But I mean this; did you expect tradesmen to adulterate commodities with things that cost more than the real article?—I did not expect to find them adulterating with things that cost more than the real article; but when they profess to supply as good an article ——

6084. Or even would you expect to find them adulterating with things that cost the same price?—No, you would not always expect that.

6085. Or at all. Would you expect a tradesman to subsist or to go bankrupt?—I think he had better go bankrupt than behave dishonestly to the public.

6086. But that kind of dishonesty would not make him bankrupt?—Not necessarily, because the public are very gullible, and they are apt to take things at the value of what they are told they are.

6087. (*Dr. G. S. Buchanan.*) Your point being that if an article alters in its quality you, looking after the Food and Drugs Act administration, look to see whether a cheaper and different article has not been introduced?—Yes.

6088. You tell us you made some inquiries with regard to age?—Yes.

6089. And you came to the conclusion that the use of patent still spirit, or one advantage of patent still spirit to the trader but not perhaps to the public, was that it enabled a new whiskey to be used?—Yes.

6090. And that you were informed that rough malt whiskies were specially made with the object of giving a strong flavour of malt to the product?—Yes, and in support of that there was an advertisement in one of the wine and spirit trade journals. I have here the "Wine and Spirit Gazette" of July 29th, 1905, and the advertisement that I am referring to reads as follows: "Long John's Ben Nevis. (For Power and Flavour.) Covers Grains. Softens Plains." I think that can only have one meaning—namely, that it covers the grain spirit, and it softens the plain spirit—the patent as they call it. I hand in that advertisement. (*The same was handed to the Commission.*)

6091. (*Mr. Guillemard.*) What does "Covers" mean?—That it cloaks the spirit; in other words, it makes the grain spirit resemble pot still spirit.

6092. What is the "plains" as distinguished from "grains," and what is "softens" as distinguished from "covers"? If you are explaining the meaning, and I want to understand what the advertisement means, as at present I do not understand it, will you explain that? I want to find out whether you understand it?—It seems to me the "covers grains" means that it cloaks the taste of the grain spirit—and I think "softens plains" is a sort of elaboration that it makes the whiskey smoother than otherwise.

6093. The "plains" and "grains," according to your interpretation, mean the same thing?—Yes, I think it is meant to be the same thing here, at all events. Ben Nevis Distillery no doubt is a pot still distillery.

6094. (*Chairman.*) Whose advertisement is this?—Macdonald and Sons, distillers, of Fort William.

6095. (*Dr. G. S. Buchanan.*) At any rate you considered that there was something mysterious about it?—Yes, I did.

6096. Having made these preliminary inquiries your Public Health Committee decided in the first place that the Public Analyst should be asked what he could do in the way of distinction by analysis?—Yes.

6097. And subsequently on a report which he presented, and having had solicitor's opinion, they directed that samples of whiskey should be purchased, and that prosecution should follow if addition of plain spirit was reported by the analyst to have been made?—Yes, that is so.

6098. Then you give a list of 15 samples of Scotch and Irish whiskies which were purchased, and submitted to the analyst?—Yes.

6099. He in the end reported that one was genuine Scotch whiskey, that five (three Scotch and two Irish) were unmixed patent still grain spirit, and that nine contained patent still grain spirit in large though varying proportions?—Yes.

6100. It might be convenient if you put in the list?—Yes, I will do so. Altogether 15 samples were at first submitted to the Public Analyst, which he certified as follows:—

3 Scotch whiskies	-	-	Entirely patent spirit.
1 Scotch whiskey	-	-	70 per cent. ,,
2 Scotch whiskies	-	-	90 ,, ,,
1 Scotch whiskey	-	-	60 ,, ,,
1 Scotch whiskey	-	-	65 ,, ,,
1 Scotch whiskey	-	-	Genuine Scotch whiskey.
2 Irish whiskies	-	-	Entirely patent spirit.
1 Irish whiskey	-	-	80 per cent. ,,
1 Irish whiskey	-	-	25 ,, ,,
1 Irish whiskey	-	-	60 ,, ,,
1 Irish whiskey	-	-	70 ,, ,,

Later on five Scotch whiskies were obtained, with the result that the analyst certified as follows:—

1 Scotch whiskey	-	-	Entirely patent spirit.
1 Scotch whiskey	-	-	90 per cent. ,,
1 Scotch whiskey	-	-	85 ,, ,,
1 Scotch whiskey	-	-	60 ,, ,,
1 Scotch whiskey	-	-	50 ,, ,,

6101. Then two of these samples you had reason to believe were made in London, had you not?—Yes.

6102. You have no reason to suppose that there was anything specially objectionable in the fact that they were made in London?—No, except that we asked for Scotch whiskey, and did not think that it was Scotch whiskey when it was made in London; and I do not think the Scotch patent grain distillers agree to that themselves. Unfortunately in the particular case referred to a summons was taken out, but a technical objection was taken to it on the ground that it had not been served at the right address, and accordingly it was dismissed on that ground; and we were told by the barrister who was conducting the case for the defence, that there would be no difficulty in getting another sample, and taking another summons out. The inspector was sent away from the Court to go straight to this place, but he went first to the office to get his sealing wax, bottles, and so on, and when he arrived at this public-house he found some of the people who had been in the Court sitting before him. When he asked for the whiskey they all laughed, and he was then handed a bottle of spirit which I have got here. On that there is this label written in ink: "This is sold as a mixture of pot and patent still spirit"; so that we never had an opportunity of taking any proceedings with respect to that sample.

6103. The only special point with regard to this particular case is the fact that the whiskey came from a London firm. It is a very well-known firm, is it not?—Yes, very well known.

6104. Who have a distillery in London?—Yes, they have a distillery in London.

6105. And make a special Scotch whiskey?—Yes, who sell a very large quantity of Scotch whiskey known as "N.S.S."

6106. (*Chairman.*) Was this label that you have been referring to which says "This is sold as a mixture of pot and patent still" put on for the purposes of the trial?—Yes, my lord, on the 27th August, 1906.

6107. Was it put on in consequence of these people going to the public-house and saying what had occurred at the Police Court?—Yes. In the Court we were told, as there was a technical objection taken to the summons, that we could get another sample of this whiskey at any time for analysis.

6108. At any public-house?—No, my lord, at this particular public-house; and accordingly we sent an inspector straight away there to get one, but he first called at the Town Hall to get his sealing wax and seal, and when he got up to the public-house he found that messengers had already gone straight from the Court to warn the publican there that the inspector was coming, and when the inspector asked for the whiskey they laughed at him, because they had pasted this label on the bottle, and, of course, that stopped all proceedings.

6109. What you mean is that when he bought that bottle it had got that label on it?—Yes.

6110. Was there any proof that it had been put on in the interval between the messenger coming and the arrival of the inspector?—When the bottle of whiskey was sold to the inspector the label was pasted on the bottle.

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6111. In the presence of the inspector?—Yes, my lord, in his presence, so that that stopped the prosecution. *This* is a sample of the same whiskey that was made in London. (*The same was handed to the Commission.*)

6112. (*Dr. G. S. Buchanan.*) Do you gather, in the case of this whiskey, that there was a proportion of Scotch whiskey, or whiskey made in Scotland, or a proportion of pot still whiskey added?—There is a proportion of malt in this. There is 60 per cent. of London spirit in it. That is what the analysis showed.

6113. And 40 per cent. of Scotch spirit?—Yes, 40 per cent. of pot still.

6114. If that was so there is a good deal more of the pot still product, which you regard as the important product, than in many of the blends that we hear of?—Yes, that is so. There is no doubt about that.

6115. The fact that the patent still part of it was made in London is common knowledge, is it not? Can you say as to that?—No. I do not think it was common knowledge at all. I know we had the very greatest difficulty in finding out that this whiskey was made in London, or that any spirit was made in London that was sold as whiskey, and it was only by getting at people who were in the distillery, and finding out what was done, that we got any information at all. We could not get any information from publicans.

6116. You have reason to believe, as a matter of fact, that it is made in London?—There can be no doubt about it, and made largely, too.

6117. Surely the distiller would have no hesitation whatever in saying so—he might not if you were prosecuting him, but in ordinary circumstances?—I know they did not like it, and anyhow they did not like the idea of the exposure.

6118. (*Dr. Horace T. Brown.*) It is labelled "Scotch whiskey," and not "malt whiskey"?—It is labelled "N.S.S.," which has been facetiously said to mean, "Never Saw Scotland."

6119. (*Dr. G. S. Buchanan.*) As you have mentioned the brand, which is quite a well-known brand, I think one ought to go a little further. "N.S.S." is made by a firm called Nicholson's, who are a firm of repute as distillers, are they not?—I do not think they are much greater offenders than others in the trade. It is "Nicholson's Special Scotch."

6120. But do they say that on the bottle?—No, but it is well known that that is what it means. You will see in some places "Nicholson's Special Scotch" in the windows.

6121. (*Dr. Horace T. Brown.*) But still the public would not understand that that necessarily meant Scotch whiskey?—I think the people who buy it pretty well understand what it is, and they understand that it is "Special Scotch."

6122. (*Dr. G. S. Buchanan.*) You mean that alongside the selling of this in bottles with this label on, there are advertisements which state that it is Scotch whiskey?—Yes, as far as my memory serves me—that is my recollection.

6123. You are not quite sure?—I have seen so many things that I am not absolutely certain, but I think it is so.

6124. (*Chairman.*) Is the point that is made as to that bottle that it is bad whiskey, or what?

6125. (*Dr. G. S. Buchanan.*) No, my lord. Dr. Harris' point is that it is a whiskey which is represented as a Scotch whiskey which consists, as regards 60 per cent. of it, of a grain whiskey which is made in London. The only objection that is taken to it is that the grain part of it is made in London.

6126. (*Mr. Guillemard.*) Is it represented as Scotch whiskey?

6127. (*Chairman.*) You say that "N.S.S.," translated in full, is "Nicholson's Special Scotch"?—Yes, my lord.

6128. (*Dr. Adeney.*) Have you ever seen that full translation yourself?—I have. I cannot call it to memory for the moment, but I will endeavour to obtain it and put it before the Commission.

6129. (*Mr. J. Y. Buchanan.*) Would not the public look upon that as a trade mark more than anything else, such as two greyhounds, or anything like that?—That it is meant as "Scotch whiskey" I have no doubt in the world, because I was in a restaurant within the last month and heard a man ask for Nicholson's Special Scotch, and he was served out of a similar bottle to this.

6130. (*Mr. Guillemard.*) Did he ask for "Nicholson's Scotch Whiskey" or for "N.S.S."?—No, the man asked for Scotch whiskey and he was served out of a bottle like this.

6131. Surely that does not prove anything?—It only proves that the people who sold it sold it as Scotch whiskey.

6132. Certainly, but what you have to prove is what the people who put the label on the bottle meant by "N.S.S." We have not a word on the bottle to show that it is "Nicholson's Special Scotch"?—I should be glad to give you the necessary information.

6133. If you can produce it it would be very useful?—Yes, I will endeavour to obtain the information for the Commission.

6134. (*Dr. G. S. Buchanan.*) You tell us in your *précis* that in considering this question you read an article on whiskey which appeared on December 26th, 1903, in the "British Medical Journal." That was an unsigned article, was it not, for which the journal takes responsibility?—Yes.

6135. I do not think we need go into the question of the authorship, but you discuss this in your proof?—Yes.

6136. Therefore I think you might tell us what your conclusions were with regard to that article. There is no objection, perhaps, to mentioning the name?—Of course, its whole force practically, or some force, at any rate, goes if the name is not mentioned. In 1903, as a reader of the "British Medical Journal," I had seen this article, and, of course, had forgotten it until the whiskey question came along. Then I looked it up and found it to be a very interesting article on the whiskey question, avowedly written for the purpose of making clear to the medical profession the difference between the two spirits. As the trial was on the *tapis* I was very anxious to obtain the writer of that article as a witness for the prosecution, and accordingly I made an endeavour to find out who he was. Finally I did find out that the writer was Dr. Schidrowitz. At that time I found also that Dr. Schidrowitz was not available because he had been employed for the defence, but nevertheless the article itself had undoubtedly a great influence on my mind in advising the Islington prosecution.

6137. In your *précis* you give us certain extracts from the article?—Yes, and this article differs materially, I think, from the views that Dr. Schidrowitz has advanced recently. In that article he says: "Originally whiskey (or at any rate Scotch whiskey) was manufactured solely from malted barley, and this is still the case with the whiskey distilled in the Highlands in pot stills. At a moderate computation roughly two-thirds of the spirit vended as whiskey nowadays is derived from other materials, chiefly maize (Indian corn) and molasses. The spirit so obtained is (or should be) called 'grain' or 'patent' spirit, the word 'grain' referring to the materials, and the qualification 'patent' to the type of apparatus in which this variety of alcohol is distilled." Of course that was a very strong point, this differentiation between the apparatus and the grain from which the two spirits were distilled. Then later on he says on page 646: "Distillation is effected in Highland malt distilleries in the so-called pot still. The process is one of simple distillation without any attempt at a fractional separation of the various constituents of the original liquor." Then he describes the pot still itself. With respect to the manufacture of "grain" or "patent" spirit he writes as follows: "Grain or patent spirit is sharply differentiated from pot still malt whiskey, inasmuch as the materials employed and the methods of manufacture are entirely different in the two cases. Whereas the Highland malt distiller employs barley malt, the grain, or patent manufacturer, can make use of any material either starchy or saccharine which is capable of being converted into alcohol. The materials mainly used in the United Kingdom for this purpose are maize (Indian corn) and molasses (the residue of the sugar factories). In Germany potatoes are chiefly employed, and in France

beetroots, maize and molasses. The molasses are of two kinds—namely, sugar cane molasses and beet molasses. The process of preparing these materials for fermentation does not, as a rule, involve any malting nor the use of a mash-tun in the ordinary sense of the word. Molasses are simply diluted and then 'pitched' with yeast. Maize and other starchy substances are treated with boiling water and steam (usually under pressure nowadays) in a 'converter' in such a manner as thoroughly to rupture and disintegrate the starch cells, and the material so prepared is saccharified by means of a little highly diastatic malt. The liquid thus obtained is filtered, or partially filtered, and then 'pitched' with yeast and fermented in the usual manner. Occasionally a mineral acid is used for the conversion or partial conversion of the raw starch, but this practice is now somewhat rare."

6138. (*Dr. Adeney.*) You know that the definition that Dr. Schidrowitz gave us last week would exclude many of these?—I do, and that has been the marvel to me, because after all he was differentiating here with regard to the machinery by which they were distilled, and the materials from which they were distilled, and this was not chemically differentiating them.

6139. (*Chairman.*) Did he not say that he had changed his opinion?—He did say that he had changed his opinion, my lord, but I do not see how he is to change his opinion as regards the still and the apparatus used.

6140. (*Dr. Horace T. Brown.*) That he did change his opinion in 1905 is very evident from his writings at that time?—Yes.

6141. These questions were asked of Dr. Schidrowitz with regard to his change of opinion, and he frankly admitted that he had materially changed his opinion some time between 1902 and 1904.

6142. (*Chairman.*) The point that you wish to make is that you cannot change your opinion in relation to the existence of facts?—That is so.

6143. You may be wrong in your opinion of what the facts are?—Yes, of course, you may be wrong as to what the facts are, but here he is describing the machinery and materials, and the machinery and materials cannot change, and have not changed.

6144. (*Dr. Bradford.*) But cannot the product change according to the manner in which the machinery is being used?—But I do not think the machinery is being used any differently with regard to the production of whiskey.

6145. But you would admit that with the same machinery and the same materials the product might change according to the way the machinery was used?—Most certainly.

6146. (*Dr. G. S. Buchanan.*) You were severely criticised by one of the witnesses the other day because you had stated in one of your annual reports that materials other than maize and cereals were used in the preparation of patent spirit. I suppose you would claim some of the extracts that you have read here as one of your sources of information?—Yes. I was not alluding to Scotch grain spirit in particular, I was alluding to patent spirit only. I did not describe it as Scotch grain spirit or anything of that kind.

6147. You were investigating the subject, and getting up facts as far as you could? You went to this article and found statements such as you have read here, and that had a considerable influence on your mind, and on your judgment?—Certainly.

6148. It was clear from the writing in the article in question that it was by some chemist who was very well informed; or, at all events, who spoke as one with authority?—Yes. I should like to hand in that paper by Dr. Schidrowitz.

6149. I think we might now go to Section 7 of your evidence unless there is anything that you consider is specially necessary to further refer to in these articles?

6150. (*Dr. Adeney.*) Would you look at the bottom of page 17 of your *précis*? It is, I think, to your point?—Yes. Dr. Schidrowitz further remarks on page 646: "The pot still connotes a simple non-fractional distillation, but patent still embodies the principle of fractionation in a high degree. The object of the malt distiller is to produce malt whiskey; that of the patent still distiller to evolve plain spirit, alcohol pure and simple, or something approaching the latter as closely as possible." He then describes the patent still. In that part of his paper dealing with the purity of spirits he says: "It has lately been contended that patent spirit is far more pure and more wholesome than heavy malt whiskey. The use of the word purity in this sense is misleading. It is argued that patent spirit is purer than malt whiskey, because it contains less bye-products. In the same way it might be argued that a solution containing one per cent. of strychnine was purer than a solution containing ten per cent. of sugar, because ten per cent. is greater than one. The example is relevant for the bye-products present in patent spirit are not only quantitatively but also qualitatively different to those in malt whiskey." I think Dr. Tatlock yesterday said something about them not being so if I recollect rightly. Then Dr. Schidrowitz goes on: "But even if the bye-products were the same (qualitatively) in both classes of spirit this would be no reason for saying that one was purer than the other, or for selling patent spirit for malt whiskey without disclosure of the fact of substitution." Then finally he writes as follows with respect to the adulteration and substitution of whiskey:—"We have already referred to the fact that roughly two-thirds of the whiskey consumed consists of patent spirit. Figures placed before the Royal Commission of 1891 demonstrated the fact that roughly 30 per cent. of the whiskey consumed at that time consisted of patent, and 70 per cent. of pot still. In the space of ten years the proportion of patent to pot has risen from 30 per cent. to 70 per cent. Large quantities of English spirit are blended with Scotch malt, and even Scotch grain."

6151. You put in that article?—Yes, I put in that article. (*The same was handed in to the Commission.*)

6152. (*Dr. G. S. Buchanan.*) Another circumstance to which you wish to draw our attention is the information that you obtained with regard to the requirements about the description of whiskey in connection with foreign and Colonial food laws, is it not?—Yes.

6153. You mentioned that Dr. Harvey Wiley, when he was inquiring over here into the method of distillation of spirits and beer, came to see you, and gave you information on the subject of his inquiry?—Yes, he did. I need not say that Dr. Wiley is a man who is known throughout the world on account of his investigations into food, and I think everywhere he is acknowledged as a very great authority. He told me that the object of his visit here was to obtain information as to the distillation of spirits and of beer, and that the conclusion he had arrived at after investigating the process of distillation in Scotland and in Ireland was that Scotch whiskey was a product made in a pot still from malt, but that in Ireland it was a product made in a pot still with malt and other mixed grains, such as rye, barley and wheat.

6154. The point that I understand you to make with regard to Dr. Wiley is that he regarded spirit made in England, Scotland and Ireland in a patent still as very much the same as the kind of spirit that is also made in America?—Absolutely so. He said this to me: "If this grain spirit which is distilled in a patent still is considered Scotch and Irish whiskey, then we do not want any of your Scotch and Irish whiskies in the United States," because, he said, they could make that themselves. Then he said that out in the West, in the midst of the maize growing country, there was a large number of distilleries, and he described some of them as running from year's end to year's end without ever stopping, putting forth a stream of spirit as thick as his arm. Of course, being a protectionist country, they did not want a spirit they made there themselves, but they wanted something different.

6155. (*Chairman.*) Cannot they make pot still in America?—They do not make Scotch whiskey there, or Irish whiskey.

6156. (*Dr. G. S. Buchanan.*) The protectionist view is that you may import into the United States Scotch or Irish pot still whiskey because they cannot make it there?—Yes, because they have not got it.

6157. Dr. Wiley regarded the patent still spirit that was made in this country as equivalent to the patent still spirit that flows out by the gallon, and as thick as his arm, in the United States?—Yes, that is what he meant.

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6158. (*Mr. J. Y. Buchanan.*) Might he not have wished to open a market for the American still spirits as Scotch whiskey in Scotland or in Great Britain?—I do not think so; but I cannot tell what was at the back of his mind.

6159. (*Dr. G. S. Buchanan.*) You have given us very interesting references to and extracts from the official publications in the United States, and others, showing the operation of the American Pure Food Law in regard to the description of whiskies. That is a matter upon which, I think, we shall have information from other sources; and although you have given a great deal of useful information, I think possibly we might very much abridge that, though it would be useful to bring out certain points.

6160. (*Chairman.*) If we can avoid taking things second-hand, and also having reiteration, it would be advisable?—I mention these things only in order that they should not escape the attention of the Commission in any way. I think it would be useful for the Commission to know them, so that they might get them first hand themselves.

6161. (*Dr. G. S. Buchanan.*) Just to put the point briefly, the American Pure Food Law of 1906 requires the Federal authority to deal with the adulteration and misdescription of foods which are the subject of inter-State traffic at home and those which are imported, does it not?—Yes.

6162. The American contention with regard to patent still spirit or grain spirit made in the United States is that it is essentially a flavourless alcohol?—Yes.

6163. And a similar contention has been applied to patent still spirit or grain spirit that is made in this country?—Yes, that is so.

6164. That is a matter that has attracted a great deal of attention in the United States, and has been the subject of a considerable amount of litigation, has it not, and inquiry?—Yes, very considerable.

6165. And the present phase of it, as you tell us here, and as can be gathered by anybody from public documents, is that the requirement which is made by the United States authorities of their own distillers and their own traders is that they should describe the whiskies in America under one of four headings, is it not?—Yes.

6166. Those are straight whiskies, blended whiskies, compounded whiskies, and imitation whiskies?—Yes.

6167. How far that has in practice been insisted upon at the present time is a matter which, I expect, we shall have information on. You are not able to tell us at the present time?—That is so.

6168. With regard to the whiskies which are exported from this country to the United States, in the opinion of the Attorney-General of the United States, as put forward by President Roosevelt, in this extract you give us, the same description and classification should be applied to the imported whiskies as are applied to those which are home made?—Yes. I have here a copy of the decision of the Attorney-General of America in the whiskey question, which was reprinted in the "Wine and Spirit Circular."

6169. (*Dr. Horace T. Brown.*) That is not absolutely settled yet, is it?—I think so.

6170. A good many of these standards are unsettled?—Dr. Wiley has been engaged in making a standard for a considerable time; but I think this is settled.

6171. (*Dr. G. S. Buchanan.*) The position is that at the present time it holds the field?—Yes.

6172. But we are not at present aware how far it has been administratively carried out, or how far it is likely to be upset by a legal decision?—No.

6173. (*Chairman.*) What is the result of it?

6174. (*Dr. G. S. Buchanan.*) Perhaps you would read the instruction at the foot of page 26 of your *précis*, which would answer his lordship's question?—Yes. In transmitting the Attorney-General's reply to Mr. Secretary Wilson, the President said: "I agree with this opinion, and direct that action be taken in accordance with it. Straight whiskey will be labelled as such. A mixture of two or more straight whiskies will be labelled blended whiskey or whiskies. A mixture of straight whiskey and ethyl-alcohol, provided that there is a sufficient amount of straight whiskey to make it genuinely a mixture, will be labelled compound of or compounded with pure grain distillate. Imitation whiskey will be labelled as such."

6175. Straight whiskey is the product of a single distillation, is it not?—I believe it is.

6176. It is self whiskey?—Yes.

6177. A mixture of two or more pot still whiskies or self whiskies, would be labelled "Blended whiskey"?—Yes.

6178. (*Dr. Cushny.*) Are there any real pot stills in the United States?—I said just now that they did not make Scotch or Irish whiskey in a pot still; but I must beg your pardon, as I made a mistake if I said there were no pot stills. I had running in my mind pot still whiskies. They use the pot still, because maize spirit is made in a pot still, and Bourbon whiskey is made in it.

6179. Would it be called a pot still in Scotland?—I imagine so; at all events, it is non-fractionating.

(Adjourned for a short time.)

6180. (*Dr. G. S. Buchanan.*) To conclude that portion of your evidence which relates to what you gathered regarding the description of whiskey for the purpose of the foreign food laws and regulations, you wish to draw our attention to the fact that the same question has originated in Australia, or in particular, Western Australia?—Yes, because that was the only information I had about it. I know there was something done by the Commonwealth, and some laws I understand have been passed since.

6181. There are certain regulations, are there not, with regard to the admission of whiskey into the Commonwealth?—Yes.

6182. But in the case of Western Australia, you ascertained from reports of the Government analyst that a distinction between patent still spirit and what he termed true malt whiskey was desirable in the interests of that State?—Yes.

6183. And that there was an official suggestion that distilleries should be obliged to put on the labels attached to their whiskey bottles whether it was a pure malt whiskey, or a blend of silent and malt whiskey, or a spirit all silent and flavoured?—Yes, that was in his report.

6184. Then you draw attention to some remarks of the Government analyst of Western Australia, Mr. Mann. This gentleman whom you quote here has made, has he not, a number of analyses of spirits, both brandies and whiskies, which are published in the "Journal of the Society of Chemical Industry"?—I believe so, but I have not seen them.

6185. There is a very interesting series of articles by Mr. E. A. Mann and Mr. C. E. Stacey, on the application of chemical analysis to the examination of commercial spirits, and they appear in the "Journal of the Society of Chemical Industry" for April 15th, 1907, and also a further article on May 15th, 1907. I do not think you actually refer to them in your extract, but these articles contain a large number of analyses of brandies and whiskies, respectively classified as standard samples from particular shipments, suspected samples, and so forth?—Yes.

6186. Probably if we refer, for the purpose of the minutes, to the fact that there are these papers that will cover a great deal of what you tell us here?—Yes

6187. But you wish, do you not, to say that somebody in Western Australia who investigated this question made some reference to the patent still spirit being more noxious than the other spirit?—Yes. This is the inspector of liquors of Western Australia, who says: "I received a letter from a gentleman in the country stating that the local publican was selling whiskey that drove the men who drank it mad. I inspected his liquors, and found that he was selling the whiskey marked No. 3 on the analyst's report." Then in the analyst's report it mentions what the whiskey is, and it is a Glasgow Scotch whiskey. Then he says: "On investigating another similar complaint I found that the hotel keeper was selling mostly No. 6"—that is No. 6 in the analyst's report, an Edinburgh whiskey. "The effect was the same in

both cases, and the liquor was silent spirit, yet brands that the public drank freely."

6188. We have not sufficient information with regard to that case to say whether these particular liquors sold out of these bottles were the whiskies that they were represented to be?—No. My object in mentioning these matters was to show that the question was equally engaging the attention of the authorities abroad as well as at home.

6189. As a matter of fact there is some requirement, is there not, in the case of the Commonwealth, for a minimum age at which the spirit should be admitted?—Yes.

6190. That is a recent requirement?—Yes, just recently.

6191. (*Mr. Guillemard.*) With regard to that statement at the bottom of page 29 of your *précis*, in which, as far as I understand it, the chief inspector of liquors in Western Australia quotes a letter which he received from a gentleman not named, stating that certain whiskey drove certain people mad, is there any statement as to whether that was corroborated?—No.

6192. It is simply a general statement?—Simply a general statement.

6193. And you put it down for what it is worth?—I put it down for what it is worth.

6194. (*Dr. Horace T. Brown.*) I notice he describes that as silent spirit, although it appears to have contained as much as 183·93 of secondary products?—Yes.

6195. (*Dr. Adeney.*) Is that caramel and tannin?—He says it was chiefly patent still spirit, artificially coloured. That was the analyst's report. Then I should like to put in this extract which appeared in the "West Australian" of Thursday, August 17th, 1905. I copied that from the "West Australian." (*Handing in extract.*)

6196. (*Dr. G. S. Buchanan.*) So far as the analytical portion of this matter is concerned, we should get that better probably from the papers that I have quoted to you, which give analyses of whiskey in detail?—No doubt.

6197. Then you have something to tell the Commission about the addition of artificial flavours to spirit to imitate whiskey?—Yes. The addition of artificial flavours to imitate whiskey is undoubtedly practised in England, and during the time of the recent trials a sample of prune wine manufactured in Dublin was given to me. This prune wine is, I understand, sold at 10s. a gallon. It is made by a firm named Thompson, of Dublin, and it is used in the proportion of one gallon to 27 gallons of spirit to give it the flavour of whiskey. (*Bottle produced.*)

6198. Can you give us any further details with regard to this—anything which shows as a matter of fact wine of this sort is used?—I tried to get information as to whether it was actually used, but I failed to do so. It is very difficult to get information from people who use it. It is utterly impossible almost unless you employ detectives or people of that kind.

6199. I can quite understand that, but my point was whether you could give us any information which showed that as a matter of fact this prune wine was advocated or offered for the purpose of flavouring spirit?—I saw it advertised in one of the trade papers.

6200. (*Dr. Horace T. Brown.*) What is the effect on silent spirit? Does it give a flavour at all resembling that of whiskey?—Yes, that is the idea.

6201. Can you from your own observation state that the flavour is somewhat that of whiskey?—It has got a very heavy vinous flavour.

6202. You would scarcely expect a whiskey flavour from prune wine?—It is advertised.

6203. (*Dr. J. R. Bradford.*) Are we to understand you saw an advertisement stating that this could be used for imparting a whiskey flavour to silent spirit?—That is my recollection. It is some three years ago now since I saw it. I have been trying to get the advertisement, and perhaps I will be able to get it yet.

6204. You say in your *précis* that it is manufactured in Dublin for the avowed purpose of adding it to silent or grain spirit. Is that statement based on this advertisement which you say you saw?—Yes, as far as my memory serves.

6205. Where was the advertisement?—The advertisement, I think, was in the "Wine and Spirit Trade Review."

6206. You cannot go in any detail into that?—No. I have been trying to get the advertisement, but at the time I saw a great many of these papers, and I am not absolutely able to say which it was. I did cut the advertisement out, but I have lost it long since.

6207. Is this prune wine used for any other purpose as far as you are aware?—I am not aware. Not only that, but there are essences used. *This* is the handbook of a firm of Emanuel Kern, of Edenkoben, a firm established in 1835. They advertise an oil that they call Cognac oil, which is intended, according to the amount added, to imitate brandy, whiskey, rum and gin. They say "4 grammes for brandy, 2 grammes for whiskey, 2 grammes for rum and 1½ grammes for gin."

6208. (*Chairman.*) Do you consider this is relevant to any question before us? I do not see how it affects any point at issue here. It is a historical review of everything connected with whiskey, but I do not think it goes to any point in issue?

6209. (*Dr. G. S. Buchanan.*) I understand you think that this information you received that prune juice might be utilised, and that cognac oil manufactured in Germany might be utilised for making certain spirits that were called brandy, whisky, rum and gin, was, as you considered, some sort of evidence that these things might be used in this country?—Yes. This is a German firm, and they produce a book in English and circulate it here. The supposition is they would not go to all that expense if there was not some sale for their products here. Then there is also an English firm, a well-known firm here, that supplies a somewhat similar article. I have their list here.

6210-11. At all events you would say that the facts that you have heard or gathered in this way from catalogues, and so forth, that essences and other things were added had an additional effect on your mind in advising that the whiskey question should be taken up?—Quite so.

6212. As a matter of fact the samples that were examined at Islington and the other samples that are known to you that have been examined that consist of patent still spirit have not, so far as you know, been concocted or contain essences?—No, we have got no report to that effect from the analyst.

6213. It is not certain they would be detected if they were present?—No, it is not.

6214. But you have no reason to believe that their use is common?—No.

6215. Now perhaps we may get to the more general question on which you, as the officer administering the Food and Drugs Act in Islington, are more able to tell us from your own direct knowledge. What has happened with regard to these whiskey prosecutions? Has the effect of the prosecutions been that there has been any change in the practice of labelling?—Oh yes. The effect has generally been for the public good, for some of the firms who sold their bottled whiskies without a label have now indicated on their label that they contain patent still spirit, or patent still products also mixed with malt spirit. In fact they make it plain that the whiskey is a blend.

6216. They have done that you think in consequence of the question having been raised?—Most undoubtedly. It was not done before.

6217. There has been some action by the blenders or the retailers, or whoever may be responsible, to get a more close description of the article?—That is so. Before that even some of the biggest blenders who undoubtedly, I believe, sell what is known as a high class blend, have changed their labels somewhat, although, I think, they have not changed it altogether in the direction of showing the public exactly what the spirit contains. I produce here a bottle of what is generally known as "Black and White." On the capsule are the words "Finest Old Highland Malt Whiskey." This bottle is some three years old, and now they have sent out another bottle with the capsule changed, and this one says "Fine Old Scotch Whiskey." So there is that change in it.

6218. (*Mr. Guillemard.*) Do you know the whiskey to be the same in the two bottles?—Of course I cannot tell. I presume they are, because I do not think they have ever changed their blend.

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6219. You do not know?—No, but I do not think there is any doubt about it.

6220. (*Dr. G. S. Buchanan.*) Is this the same brand?—It is sold under the same brand—"Black and White." I think there is no doubt it is a blend. They admit that themselves.

6221. It is a very well known whiskey, is it not?—Very well. But they have altered the label on the back.

6222. Here again you are unable to say what the reason of this alteration may be, but you draw the inference that it has something to do with the fact that the description of "whiskey" has lately received some further attention?—Yes. I think anyone reading the label on the old bottle could only come to the conclusion that it was malt whiskey. The second one is not so strongly worded.

6223. Is the earlier sample that you have produced so long ago that only a Highland malt whiskey was being used at that time?—Oh no. I have seen the whiskey myself with these labels on it since the trial. I think the last label has been on about twelve months.

6224. (*Mr. J. Y. Buchanan.*) What is your evidence that it was not malt whiskey?—I do not think it was ever malt whiskey.

6225. You have no evidence of that?—It has been well known as a blend for years.

6226. (*Dr. G. S. Buchanan.*) You wish to make a further point that the effect of these trials has been to acquaint the public with the fact that spirit made from maize is being sold as Scotch and Irish whiskey, which is a fact which in London, or at all events, in your district, they did not know before?—That is so. In some of the bars in Islington at the present time the following notice is to be seen:—"Notice! Whiskies. (Food and Drugs Act). Scotch and Irish whiskies sold at this establishment are not guaranteed to be solely pot still spirit."

6227. (*Chairman.*) What is the date of this bottle which you have handed in? I see it refers to "The Royal Commission"?—All the labels up to very recently contained that statement about the Royal Commission, but I think that is a mistake for the Committee of 1891.

6228. They refer to the Committee in terms just below?—Yes. That is entirely a mistake. For instance, Dr. Schidrowitz, in speaking of the Committee of 1891, has called it a Royal Commission. It is a mistake that people have fallen into.

6229. But they refer to the Committee immediately underneath?—I think it is simply a mistake.

6230. (*Dr. G. S. Buchanan.*) You are of opinion, I understand, as the result of conversation with various people in different grades of life and so forth, that the public think that if the spirit should be sold it should be sold under its proper name?—Yes.

6231. (*Chairman.*) What do you mean by its proper name?

6232. (*Dr. G. S. Buchanan.*) Perhaps you could expand that a little?—I mean that the patent still spirit should be sold under the name of "Patent Still" or "Grain Spirit."

6233. Or "Grain Whiskey"?—I would hardly say that it is entitled to the name of "Grain Whiskey."

6234. But, at any rate, it should be distinguished in some way?—I think it should be distinguished, but that is a matter that I am not very strong on as to whether the word "Whiskey" should be used or not. I think, however, that they ought to establish a right to the use of the word "Whiskey," because undoubtedly the word "Whiskey" for many many years, 150 years, was applied only to the product of the pot still.

6235. (*Chairman.*) Because there was no patent still?—But this article I hold is a different article, and therefore I would say it was not entitled to the name of "Whiskey."

6236. (*Dr. G. S. Buchanan.*) You tell us that in the trials the costs of the defence in the first instance at the Police Court were divided between the patent still grain distillers and the blenders?—Yes.

6237. And subsequently, I believe, the grain distillers bore the expenses alone?—Yes. I believe there is a difference of opinion now between the blenders and the grain distillers as to the use of the name "Whiskey."

6238. That the Commission will have an opportunity of hearing from the traders interested?—Yes.

6239. Then you give us some historical evidence with regard to the use of the word "Whiskey"?—Yes. It is from the old Celtic word "Uisge," which signifies water.

6240. You understand it is derived from that rather than from "Usquebaugh"?—Uisge beatha. Usquebaugh is a corruption of it. It means the water of life.

6241. (*Dr. Adeney.*) Should it not be "Uisque"?—Yes.

6242. (*Dr. G. S. Buchanan.*) Perhaps I may now take you to page 37 of your *précis*, because we need not go into the historical evidence in much detail as we have had so much evidence about it before. You tell us it was only in the latter part of last century that the pot still whiskey was begun to be mixed with maize spirit, which is made by a different process. When this custom was disclosed by the recent trials the patent still distillers claimed that their product was whiskey, Scotch or Irish, according to the country it was made in, and that they were entitled therefore to mix it with pot still whiskey without disclosing the fact, and they also claimed the right of user?—Yes.

6243. That was a perfectly intelligible position, but I think you wish to make some observations on that?—I was going to say this is the usual practice in all food adulterations, which I may illustrate by the example of jam, the sugar of which is now largely replaced by glucose, a cheaper article, on the usual plea that it makes a better article, although the public know nothing about it. A very large portion of the jam that is now sold is mixed with glucose.

6244. (*Dr. Horace T. Brown.*) What do you mean by glucose? Do you mean the sugar glucose, or what is known in America as glucose, which is a dextrinous substance?—It is practically invert sugar, I suppose.

6245. Is it not a fact that the glucose which is used in jam in this country is used to the extent of some 10 or 15 per cent. for the purpose of preventing the crystallisation of the sugar?—That is what I say. I am afraid they use more than 15 or 20 per cent.

6246. It is not in itself sweet?—No, it is not at all sweet.

6247. It cannot replace sugar in the sense of sweetening?—Not altogether.

6248. (*Dr. G. S. Buchanan.*) Is the usual glucose that is used the American water white glucose?—I believe so, entirely.

6249. Perhaps some other instance occurs to you (that one seems to be rather a doubtful instance) in which a newer and cheaper product replaces the older product and claims the same name without any disclosure of the fact that something has been substituted?—There is the case of sugar—Demerara sugar and beetroot sugar. There you have got the complete substitution of the one article for the other.

6250. In the case where a coloured sugar is sold as Demerara sugar?—Yes.

6251. Both could equally be sold as brown sugar, could they not, without objection?—Possibly they could, but they could not be sold as Demerara sugar.

6252. I might ask you, as you have experience in these things, whether you have anything to say about the argument we have heard here very often on the question of flavour and taste. We have had it stated to us again and again that the public have not the least care, and it does not matter to the public a bit what sort of article they really get so long as they get something they like, that it does not matter at all how the article is described or what its composition is as far as the ingredients are concerned, or anything of that sort, whether from a superior product or whether from an inferior product?—I do not think, as a rule, the public know very much about what they get. I think in these days the public depend almost entirely on the sanitary authority to see that they

get genuine articles. It is a rare thing indeed for us to get complaints in Islington as to foods. Although we have 340,000 people there I do not think the complaints average half a dozen a year.

6253. Even milks?—Even milks. As I say the public look to the sanitary authority to protect them against receiving fraudulent foods. As a rule they do not know what they are getting. So it was, I believe, in the case of whiskey, they had no idea what they were getting.

6254. Now with regard to tastes and flavours. Assuming you can produce the same taste or the same appearance in different ways, what do you say?—I think if you did that to spirits and got something the flavour of whiskey, that it would be the duty of the sanitary authority to protect the public against the fraud, although the public themselves might like it. Of course, there comes into that this question, and it is one of the questions that one cannot forget in administering the Food and Drugs Act—unfair competition. Occasionally when one man is selling a mixed butter or a fraudulent butter, another person in the neighbourhood will send to us and ask us to take samples of that man's goods because he is undersselling him and injuring his trade.

6255. In the case of butter I might ask you one question, as you have mentioned it, with regard to the description of butter and margarine. The margarine manufacturer at the present time has no objection to describing his product as margarine, has he?—Not the least. He generally describes it as margarine although we do know that margarine is more frequently sold for butter than anything else.

6256. It is sometimes passed off as butter?—Very often; not so much during the last few years, but there was a time in Islington five years ago when it was a very common practice by a large number of Welsh people.

6257. So far as I have been able to gather personally, the present attitude of the margarine manufacturer is that the drastic legislation, or the comparatively drastic legislation which has led to the sharp distinction between the two has by no means damaged his trade?—It has not.

6258. You have some remarks on page 39 of your *précis* on the subject of the effect of grain spirit on public health?—Yes. I need not say that this question of the effect of grain spirit on the public health has given me very great anxiety, and I looked into it very carefully before the prosecutions. I found that lunacy from alcohol had certainly increased during the preceding 15 years, but I thought it was unwise, indeed absolutely impossible, to draw any inference from that fact. I made inquiries from the Superintendent of the London County Asylum as to whether he differentiated in any way between the different spirits that caused alcoholic insanity, but he replied to me that he had not done so, and that no records of the kind were kept, and I could not discover anything in the records of the Commissioners of Lunacy that showed that any differentiation had been made anywhere else.

6259. You dismiss that evidence as regards lunacy as altogether negative?—Yes.

6260. It does not tell you anything one way or the other?—No. I also looked into my own records in Islington to see whether there had been any increase in the different diseases that might be ascribed to whiskey.

6261. (*Chairman.*) You must ascribe it to the difference between pot and patent still whiskey to be of any use?—Of course. But I wanted to see if there had been any increase.

6262. You found nothing?—I did not.

6263. It is no good telling us you made inquiries if nothing came of it. No result was arrived at?—No, I could find no results.

6264. (*Dr. G. S. Buchanan.*) You went into the matter in various ways, but I take it that the result of your inquiries in other directions was also either negative or there was no evidence available?—Yes.

6265. You point out that you consider that persons might drink more freely of patent still spirit at a sitting than pot still spirit, but subsequently they would be more likely to feel the effect of the alcohol?—That is so. I can speak so far as the effect on myself is concerned most certainly it is my experience, and the way it has affected me is this: that a pot still spirit quickly diffuses itself. I felt the face flush and I felt a warmth in my body, and I have felt the pulse affected soon after its consumption; but I must say that the same effect does not occur until a later period with a patent still spirit or a blend of it. That is my own experience.

6266. (*Mr. Guillemard.*) Taken in equal quantities under similar conditions?—Taken in equal quantities under similar conditions. I may say at once I have made no exact experiments, but I am telling you my general experience.

6267. (*Chairman.*) Which result did you appreciate most?—The pot still spirit, because I know that patent still spirit lies very cold in the stomach.

6268. You were less flushed with the patent still?—Yes, but I think undoubtedly persons can consume more patent still spirits without affecting them at the time than they can of pot still, the result of course being that in order to get a certain effect you have got to take more patent still spirit, and the result is felt more on the next day, while the result on the nervous system must lead to serious harm.

6269. (*Dr. G. S. Buchanan.*) You think something might be said from that point of view if the matter were carefully worked out and looked into?—I think so. You want some very careful experiments made on that question, and experiments carried out under proper and suitable conditions. No doubt the Commission will have that done.

6270. I notice at the end of your *précis* you tell us something with regard to the prosecutions that took place a little while ago with regard to adulterated brandy. I think it would be well if you told the Commission what happened after you obtained the judgment in the brandy case, which was, if I remember rightly, that a spirit sold as brandy containing either grain spirit or silent spirit—I do not know how it was referred to in the analyst's certificate—was an adulteration?—Yes; I think it was the quantity of ethers.

6271. But the actual offence alleged was not for selling brandy that did not contain the right amount of ethers, but it was for selling brandy with so much spirit not derived from the juice of the grape?—Yes.

6272. After that judgment, what happened?—Immediately after that judgment there were certain principal people in the trade in Mark Lane and elsewhere in London who issued circulars. I saw one or two of these circulars. One of them says: "In view of what has hitherto been the custom of the trade, this decision places the retailer in a position of great difficulty, and, in order to meet it, we think that in retail bars a notice should be displayed in a conspicuous place stating that the brandies sold are not guaranteed to be entirely derived from wine. A similar notice should be attached to bottles, except where there is a guarantee that the brandy is distilled from grape juice." There were several firms who sent out these circulars.

6273. I think it would be convenient if you put specimens of those circulars in?—Yes. It shows the course they took at the time.

6274. (*Chairman.*) Perhaps it would be better not to put in the names and addresses of the firms?—Very well, my lord. The two circulars are as follows:—"London, E.C. 31st May, 1904. Dear Sir,—Brandy. We beg to call your attention to an important decision delivered by the North London magistrate yesterday, to the effect that brandy when sold as such, must be entirely distilled from wine, and must not be mixed with silent spirit, whether derived from wine or other materials. In view of what has hitherto been the custom of the trade, this decision places the retailer in a position of great difficulty, and, in order to meet it, we think that in retail bars a notice should be displayed in a conspicuous place stating that the brandies sold are not guaranteed to be entirely derived from wine. A similar notice should be attached to bottles, except where there is a guarantee that the brandy is distilled from grape juice. These precautions need only be temporary, and

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during such time as is necessary to get rid of existing stocks. Our travellers have instructions to show you on their next call brandies that have been sold to us as from wine only, and have passed an analyst. The above remarks do not apply to our Longenek, which is a pure grape brandy, nor to many qualities that we sell; but, as analysts differ so much in their conclusions, we think it right to recommend you to adopt this or some other form of self-protection. Yours faithfully, ——." Then the other is:— "London, 31st May, 1904. Dear Sir,—Re brandy posecution at North London Police-court, before Mr. Fordham. Referring to the magisterial decision delivered yesterday, we beg to notify that we will not guarantee any brandy to be distilled solely from the pure juice of the grape, and we recommend all our friends to post up a notice to this effect in a conspicuous place. Yours faithfully, ——."

6275. (*Dr. G. S. Buchanan.*) The effect was this: that there were a series of circulars sent out, stating that the traders concerned should give notice that they did not guarantee any brandy to be distilled solely from the juice of the grape, or words to that effect?—Yes. And here is a notice that appeared also, largely in the bars, which I will also hand in: —"Notice. Owing to the decision given yesterday by the magistrate at the North London Police-court, that all spirit sold as brandy should be the product of distillation from grape wine only, notice is given that, in order to meet the requirements of the Excise, all spirit formerly styled brandy will, until our samples have been analysed and passed, be sold under the name of 'Eau de Vie.'"

6276. These brandy prosecutions were taken up not only in your district, but in a number of other districts throughout the country, and particularly in Scotland?—Yes.

6277. They were taken up in Glasgow, were they not?—Yes.

6278. You told us that one effect of those prosecutions was that attention was attracted to rum?—Yes, attention was directed to rum, and Mr. Nolan, who is here now, told me that the Jamaican Government passed a law which enabled them to send him to England, as Commissioner to this country, to protect their industry.

6279. Can you tell us in a few words what is the particular point with regard to Jamaica rum? Is Jamaica rum a pot still rum?—Jamaica rum is a pot still rum, and it has been undersold in this country by a rum made in Demerara in a patent still. The difference between the two rums is extremely marked, and the object of the Jamaican Government was to prevent this Demerara rum and similar rums being sold for their rum.

6280. The action taken in that case has been under the Merchandise Marks Act, has it not?—They have taken action under the Sale of Food and Drugs Acts, but latterly entirely under the Merchandise Marks Act.

6281. Then you have a suggestion in your *précis* which I think would be useful to the Commission. You make some observations with regard to the alcoholic strength at which whiskies are retailed?—I should like to suggest to the Commission that it is advisable that all whiskey which is sold over the counter should be sold at a uniform alcoholic strength.

6282. (*Chairman.*) Suppose I wanted a weak whiskey, why should I not get it?—If you want a weak whiskey you can always dilute it, but they will charge you the same for it, my lord. What I think is this, that a great many people are accustomed to go into a bar where the whiskey is exceedingly dilute and then they go somewhere else where the whiskey is stronger. In the one place it may be 37 under proof or 30 under proof, and in the other place it may be 18.

6283. What is your remedy?—The remedy is to have a uniform strength of spirits sold over the counter, so that when a person goes into a place he may know that he is getting a spirit of the uniform strength.

6284. You mean uniform over the counter throughout the land?—Yes, my lord.

6285. Where do you allow for the variation of taste? —In strength.

6286. If you have one uniform strength, every human being must drink the same strength. How can you make it stronger?—By putting less water in it.

6287. Why should you make all people in this country drink whiskey weaker than they like?—I think if whiskey was sold at about 20 under proof over the counter they would have a spirit that is strong enough for any purpose. I do not think anybody ever drinks it much stronger than that. Whereas if they did not like that strength they could dilute it weaker, but it is strong enough for drinking raw.

6288. (*Dr. G. S. Buchanan.*) At present the dilution is done by the retailer?—Quite so.

6289. I suppose one point you would wish to make is that the customer gets whiskey and water and pays the price of whiskey?—That is so. There is no doubt about it.

6290. With regard to that, can you tell us whether there is any limit to which a man may go in watering the whiskey, provided he gives notice of the fact?—There is no limit at all, provided he gives notice. It is no uncommon thing to find a notice which I have seen in Islington to this effect: "Notice. All spirits sold at this establishment are of the same superior quality as heretofore, but to meet the requirements of the Food and Drugs Adulteration Act, they are now sold as diluted spirit. No alcoholic strength guaranteed."

6291. That means that a publican can add as much water as he pleases?—Yes. In consequence of this or similar notices no prosecutions could be taken against the vendors of nine samples of whiskey, eight samples of gin, three samples of rum and two of brandy procured in Islington, although every one of them was sold contrary to the 6th section of the Sale of Food and Drugs (Amendment) Act, 1879. It is there laid down that whiskey and rum and brandy must not be reduced more than 25 degrees under proof.

6292. (*Mr. Guillemard.*) Without notice, but there was notice in these cases?—There was a notice in the bar.

6293. I think the Act expressly said it was not an offence if you gave notice?—Yes, that is so, I think.

6294. (*Dr. G. S. Buchanan.*) I think it is only part of the general Act which says that anyobdy can escape if they give notice. At this moment you are not complaining that it is an offence, but you are merely pointing out that it opens the door to a considerable amount of fraud, as I think you call it?—It is practically fraud, because nine out of ten people who go into a public-house do not see these notices up there.

6295. One question about those notices. Are notices of this kind very common in public-houses?—They are exceedingly common. The other day, seeing the name of the printers to a notice in a public-house, I took the trouble to write to those printers and ask them if they would be good enough to send me copies of all the notices they printed and issued to public-houses, and accordingly, by return of post I received the following notices: First, there is the one that you have already had about brandy. "Notice. To Customers. All spirits sold at this establishment as Brandy are of the same superior quality as heretofore, but are not guaranteed to be *solely* extracted from the juice of the grape." Then there is one about rum. "Merchandise Marks Act. Rum. Customers are herewith notified that although the greatest care is taken to supply *the very finest Rum* obtainable, we cannot, owing to the above Act, guarantee it to be distilled in Jamaica." Then there is a notice with regard to port wine. "Notice. Port. (Food and Drugs Act.) Wines sold at this establishment as Port are guaranteed to be of the same superior quality as heretofore, but are sold as a blended Wine, and not necessarily the produce of Portugal. Oporto Wine supplied when asked for." Then with regard to whiskies. "Notice. Whiskies (Food and Drugs Act). Scotch and Irish Whiskies sold at this establishment are not guaranteed to be solely Pot Still Spirit."

6296. I suppose in your view if notices of this kind can be put up and are put up saying always what these spirits are not, there is no reason why they should not be replaced by notices saying what they are?—Quite so. If notices are put up at all they ought to state what the spirits are, not what they are not.

6297. I have been given some supplementary papers but I do not know whether there is anything in them

that you wish to put in?—There is the question of the prices of these liquors. I thought it might be interesting to the Commission to know exactly what measure of spirits was, as a rule, sold in London as a glass of whiskey. I have got the measure here. (*Producing measure.*) It is a quarter of a gill, and I find that there are 128 quarter gills in a gallon. I have calculated here the price that that works out per gallon of spirit when the spirit is sold at 2d., 3d., 4d., 5d. and 6d. a glass. When sold at 2d. a glass it works out at £1 1s. 4d. per gallon, when sold at 3d. per glass it works out at £1 12s. per gallon, when sold at 4d. a glass it works out at £2 2s. 8d. per gallon, when sold at 5d. a glass it works out at £2 13s. 4d. per gallon, and when sold at 6d. a glass it works out at £3 4s. per gallon. My object in doing that was to call attention to the profit that is made. Of course I am not including establishment charges in these figures at all, these are only the actual prices of spirit which I have worked out. I have taken a patent still spirit three years old which at proof cost about 2s. a gallon. I think that is a fair price. That is equal to 10s. 5d. per gallon at 20 under proof, 20 being the usual strength at which these spirits are sold. That is 10s. 5d. with duty. The profit, when sold at the price specified, would be, at 2d. 10s. 11d. per gallon, at 3d. £1 1s. 7d. per gallon, at 4d. £1 12s. 3d. per gallon, at 5d. £2 2s. 11d. per gallon, and at 6d. £2 13s. 7d. per gallon.

6298. Are these profits at proof?—No, they are profits at a drinkable strength—20 under proof. In the case of pot still spirit I have taken a five-year-old whiskey, 15 over proof, at 6s. per gallon—that is the cost of the whiskey at 15 over proof. Reducing that to 20 under proof it will cost 13s. per gallon with duty paid. If sold at 2d. the profit is 8s. 4d., if sold at 3d. the profit is 19s., if sold at 4d. the profit is £1 9s. 8d., if sold at 5d. the profit is £2 0s. 4d., and if sold at 6d. the profit is £2 11s. My object is to show that a really good pot still spirit can be sold with a reasonably good profit.

6299. At the same time that a somewhat better profit is made from the patent still spirit?—Quite so.

6300. (*Mr. Guillemard.*) I did not quite follow what you said just now about an offence against section 6 of the Food and Drugs Act 1879. I thought what happened was this, that a publican puts up the notice in his place to say that he does not guarantee the strength of spirits to be anything in particular?—Yes.

6301. He then sells a spirit which is more than 25 below proof?—Yes.

6302. If he puts up such a notice and sells such a spirit at more than 25 below proof, is that an offence against any Act?—Not if he puts up a notice.

6303. You said that he did put up a notice and you then say that every one of these cases in which that was done was an offence against the 6th section of the Act. But surely it is in conformity with the Act—it is not against any section, is it? Is what you meant to say this, that if you could have the drawing of the Food and Drugs Act 1879 yourself you would prevent what now is done under that Act without contravening it?—No, what I meant was this, that he was selling a spirit the strength of which was reduced below that to which the spirit is allowed to be reduced when selling without a notice.

6304. But there was a notice?—There was a notice.

6305. Therefore there is no offence. Surely that follows?—There was no offence; there would have been prosecutions if there had been an offence.

6306. But this is what you say in your *précis*, "In consequence of this or similar notices no prosecution could be taken against the vendors of nine samples of whiskey, eight samples of gin, three samples of rum, and two of brandy, although every one of them was sold contrary to the 6th section of the Sale of Food and Drugs (Amendment) Act, 1879." It is not contrary to any section is it? It is contrary to what you wish to be the effect of the Act, but not contrary to the actual section?—Quite so.

6307. There is no offence at all?—No, there is no offence at all.

6308. (*Dr. Bradford.*) You state in your *précis* that you think there is no doubt that people drink more silent spirit than pot still whiskey?—Yes.

6309. Could you give the Commission the evidence on which you base that?—During the hearing of the case, I think it was at the Clerkenwell Sessions, a man there stated that he had been selling pot still spirit, but that another publican in the same street not far from him was selling patent still spirit. The people left him to get the patent still spirit because they could drink more of it.

6310. That is what you have been told?—That was in the evidence.

6311. That is all the evidence you have on the subject?—That is all, except some general conversation with persons as to the effect on themselves.

6312. (*Dr. Cushny.*) Did you think that was a reasonable explanation of the publican?—I think it was. I think that patent still spirit does not take effect so quickly, and that people standing talking drink more of it. I think that is so, undoubtedly.

6313. Do not you think it is because the public like it better? Would not that be the simpler explanation?—They might like it better, of course, I cannot say, but they undoubtedly can drink more of it.

6314. On what ground did Dr. Wiley define Scotch and Irish whiskey?—On the ground that he went through the distilleries in Scotland and in Ireland and examined the method of distilling very carefully, and formed his conclusion in that way.

6315. Do you think the Commission would be able to define them easily if it went to Scotland and to Ireland, because we have been struggling to do that for the last six weeks?—I cannot say what the Commission can do.

6316. How long was Dr. Wiley in Scotland and Ireland?—I do not know, I could not tell you at all.

6317. He must have seen the patent still going on as well as the pot still. Why did he say "This is Scotch whiskey and that is not Scotch whiskey"?—He examined the different methods of distillation in Scotland and saw what was being done. I do not know why he came to the conclusion, but he came to the conclusion evidently that only pot still spirit was Scotch whiskey, and that pot still spirit in Ireland was Irish whiskey.

6318. It does not seem to me that his opinion should carry very great weight unless he gives the ground for it?—Possibly not, but I am only putting in this evidence to show the Commission what other people considered Scotch and Irish whiskey to be. Dr. Wiley is a very great authority on foods throughout the world.

6319. (*Dr. G. S. Buchanan.*) You did not accompany Dr. Wiley?—No, I did not accompany Dr. Wiley.

6320. (*Dr. Cushny.*) You assume that German spirit is not worse than rectified spirit, but is either bad?—I have an idea that all spirits are bad in a sense.

6321. Is either worse than pot still whiskey?—I could not tell you. I have never drunk any of it.

6322. Several times in your evidence you rather infer that it is worse?—The general opinion is, I think, that it is not so good as the English and Scotch spirits, but I have no personal knowledge of it at all.

6323. (*Mr. J. Y. Buchanan.*) At page 3 of your *précis* you say that "During the hearing of the prosecutions against certain publicans in Islington for selling spurious brandy, it became apparent that patent still grain spirit was not only used in adulterating it, but also in adulterating Scotch and Irish whiskey." Is not that rather begging the question to say it is adulteration?—I look upon it as an adulterant.

6324. Have you not heard it given in evidence that patent still whiskey has been manufactured and sold and bought openly in Scotland as whiskey for over forty years?—I have heard that.

6325. Would not that bring it under the definition not of adulteration but of blending?—I do not think it is a blend now. I do not think they are the same spirit.

6326. But it is surely improper to talk of adulteration?—From my point of view it was adulteration. There would have been no prosecution if we did not think it was adulteration.

6327. You go on to say that the labour members of the Borough Council told you that there was a whis-

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key sold to the labouring classes in London that was poison. Did they give any indication of what they meant by "Poison"?—No. It affected them badly; they were sick next day, and all that. That is what they told me. There was a good deal of talk about it. Of course one does not take everything one hears as actual gospel.

6328. Did you not suggest to your labour members that perhaps the alcohol had something to do with it?—I made no suggestion. They were my masters for the time being.

6329. And they said that something, if possible, should be done to stop the sale? Could not the labour members have used their influence to stop the purchase by the labouring classes?—Very likely they could if they chose to do so. I think there are a good many leaders among the working classes who attempt to prevent their fellows drinking much.

6330. You say that one of the sanitary inspectors informed you that he was present in a public-house when a traveller called on the landlord and offered a German spirit at the price of apparently grain spirit. Have you any evidence that the landlord bought that spirit?—No, the landlord did not buy it. The landlord turned on him and he said, "Get out of this, you rascal. Do you want to ruin my trade?" The landlord did not touch it.

6331. That alters the bearing of it very much?—I did not intend you to infer that he bought it.

6332. (*Dr. Adeney.*) Did I gather a right impression from your evidence in thinking that you classified in your own mind the Scotch blenders of pot and patent still with the manufacturers of decoctions of silent spirits and essences?—No, I did not mean to convey that to the Commission. I think the blenders of Scotch and Irish whiskey use grain spirit as a rule in this country, that is to say, the recognised blenders. But when one gets down to publicans you do not know what they do in their own place. There is no control, and nobody knows what they do. I have an idea that something is going on. Not long ago I went into a place and I had a glass of whiskey; I immediately spat it out of my mouth again. It was a vile concoction, and I said to the man: "What on earth is this?" He said, "Oh, that is my own blend." I said, "How do you mean?" He said, "We blend it ourselves." Of course, one does not know what it is. It may have been very new pot still spirit, and very bad grain spirit; I do not know which it was, but it was a frightful concoction.

6333. You do not wish to press much of the evidence you have given against the Scotch blenders?—I wish to say nothing against the blenders as to the quality of the spirit. I believe the best blenders sell good patent still spirit and good pot still spirit.

6334. Then you have no objection to patent still spirit being consumed?—I know of no reason at present why it should not be consumed, but I think it ought to be consumed under its own name, as it is, in my opinion, a different spirit; and if it is the spirit they all say it is, then there ought to be a very considerable sale for it under its own name and own description on the bottle.

6335. You do not suggest by any of your evidence that patent still spirit is more deleterious to the consumer than pot still spirit?—I do not think so, taken in equal quantities.

6336. There was one remark that dropped from you—I do not know whether I took it rightly. I think you said at the time of the inquiry by the Parliamentary Committee of 1890 and 1891, there were no such fine distinctions then drawn between patent still and silent spirit as now?—No, I do not think there were.

6337. Were you quite correct in that? Do you remember Dr. Bell's evidence before that Committee?—Yes. But then you had Dr. Pavy again who was an authority on foods, who practically took the other side. I do not think they are very strong on the question.

6338. Do you remember that Dr. Bell actually gave analyses of pot still spirits, patent still spirits, and foreign silent spirits?—No. I think they differentiated them, but I do not think there was a very strong opinion otherwise.

6339. Do not you think much of the prejudice against the patent still spirit has arisen from the confusion of the terms "patent still" and "silent spirit"?—I do not know. Silent spirit is rather a vague term, because it includes rectified spirit. Rectified spirit is a well-known term, and I do not think the term "silent spirit" is ever substituted for rectified spirit. I never heard of it. I think silent spirit is a spirit less highly rectified than rectified spirit.

6340–1. What do you think silent spirit refers to generally?—I think it is spirit so rectified that you cannot tell its origin.

6342. Is that silent spirit produced by the patent still distillers a product to be consumed as whiskey?—Undoubtedly it is, because you have got it produced here in London, and used as whiskey. I judge from the evidence we have had that the London spirit is less flavoured than the Scotch spirit, and therefore more silent.

6343. But you can give us really no exact evidence to prove that?—It is very difficult to find it, but I think the Commission will be able to get it.

6344. I was anxious to see whether you really pressed this point that silent spirit and patent still spirit are terms interchangeable?—I think they are.

6345. Is that quite fair to the grain distilleries?—I cannot personally distinguish a very great difference between these spirits. I have tried several times. Only the last week I examined several samples of Irish and Scotch and London spirits, and I must say I could not tell the difference between them.

6346. You are aware that a definition has been put forward by Mr. Walter, on behalf of patent still distillers, that would exclude all these concoctions that you have been referring to?—I have heard so; but I was not here when Mr. Walter gave his evidence.

6347. (*Dr. Horace T. Brown.*) I gather from your evidence that you take a full share of the responsibility in advising your Council with regard to these prosecutions?—Yes.

6348. It appears to me that you started with the assumption that grain spirit made in a patent still could not be whiskey and had no title to that name?—Yes.

6349. Did you make many inquiries on this question? Did you inquire of the Scotch distillers, and did you travel for the purpose of getting information, or did you take very much trouble in order to get information of any kind?—I did not travel.

6350. Were you dependent on Dr. Teed for your information on those matters?—Dr. Teed and, I believe, our solicitor both travelled. I did not go.

6351. You did not get information for yourself?—No; but I was acquainted with distilleries in my early youth. I knew half a dozen distilleries, and I was well acquainted with the inside of them.

6352. But for the purposes of this particular inquiry you did not make any special effort yourself to gain information?—No.

6353. You took it from others?—I depended a good deal on my own knowledge as to whiskey, especially Irish whiskey.

6354. Did you take part in framing those definitions of whiskey?—No.

6355. You have given, on page 13 of your *précis*, some interesting details of some 20 samples or so, which, I suppose, were taken in Islington?—Yes.

6356. Twenty samples of whiskey on which, I suppose, Dr. Teed reported?—Yes The results are stated on his certificates.

6357. We have had no previous information of these samples, and it would be very interesting to know what were the analytical results obtained by Dr. Teed—that is to say, what was the basis on which he calculated this percentage of patent still spirit in each case?—I think very likely I have the records—in fact, I am almost certain.

6358. Can you give us the coefficients in those cases?—I will hand you in the certificates.

6359. (*Chairman.*) To make your evidence complete on the point, you do not object to patent still spirit being sold as such?—No.

6360. You do not object to blended spirit being sold in England?—No.

6361. You do not object to any degree of the blend?

—No. I think that the degree of the blend should be stated on the mixture.

6362. The only thing you want apparently, on behalf of what we will call the prosecution, is that the exact quality of the whiskey, pot still, patent still, or blend, should be stated in some way or other, if possible, to reach the consumer?—Yes, my lord. I have got here a little parcel of spirits that were bought in twopennyworths in the East of London. There are 12 spirits. I did this in consequence of Dr. Schidrowitz's examination the other day, when he said he bought quarts of spirits for analysis. I think, my lord, it would be interesting if I handed them into the Commission. I have not opened them, so I do not know the nature of any of them. I think it would be interesting if the Commission handed these spirits to a taster such as Mr. Pheysey to examine. (*Handing in samples.*)

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6363. The Commission are much obliged to you for the evidence you have given.

The witness withdrew.

(*Chairman.*) As the Commission is about to adjourn for the Easter recess, I desire to say that we have now sat on 12 days and examined 34 witnesses. We certainly have obtained a considerable amount of valuable information, and while we are not desirous in any way to limit the extent of the inquiry, we shall endeavour to escape as much as possible from unnecessary repetition. The evidence that will be first taken after we re-assemble will probably be that of persons occupied as blenders. The length of the recess has to be governed by two considerations. In addition to the ordinary recess, certain of the Commissioners have to find time for visiting some distilleries in Ireland and in the Lowlands and Highlands of Scotland. The result is that the earliest available day for the re-assembling of the Commission will be Monday, May 4th.

Adjourned to Monday, May 4th.

THIRTEENTH DAY,

Monday, 4th May, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. JAMES GREENLEES, called.

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6364. (*Chairman.*) You are a partner in the firm of Greenlees Brothers, pure malt whiskey distillers, bonded warehouse keepers, blenders and whiskey merchants?—Yes.

6365. You carry on your business in London and Glasgow, and you have your bonded warehouse at Campbeltown?—Yes.

6366. You are a Director of three different companies, Greenlees and Colvill, Limited, of the Hazelburn Distillery; Colvill, Greenlees and Co., Limited, Argyll Distillery and Burnside Distillery; and the Speyside Distillery Company, Limited, Kingussie-on-Spey?—Yes.

6367. What has been the length of your experience?—About 40 years.

6368. When did you first commence your practical experience?—In 1871. Previous to that I was brought up at a distillery and knew all about distilling, but I commenced business as a blender in 1871.

6369. In your early days and from what you have learnt as to what existed before 1871, I believe the habit of trade was to offer pure self whiskies unblended?—Yes.

6370. I suppose different distilleries produced different classes of whiskey with different flavours?—Entirely. Each district had its own flavour.

6371. And I suppose in the early times the pot still whiskey was the one that was principally known?—The patent still whiskey was as well known as the pot still. Both were perfectly well known.

6372. Which had the greatest trade?—In 1871 the largest quantity made would be patent still. I refer to Scotland.

6373. And both pot and patent still were sold as self whiskies?—Yes.

6374. Do you know what was the effect upon the trade in England of selling the self whiskies? In Scotland I suppose they consumed Scotch whiskies?—Yes. The English people were not accustomed to the high-flavoured Scotch whiskies. Of course, in the case of a Scotchman living in England he had his own particular fancy, whether it was Islay or Glenlivet or Campbeltown.

6375. There is no doubt that some Scotchmen do live in England?—They do.

6376. And they adhere to their own whiskey?—Yes.

6377. But I believe in early times the bulk of the whiskey consumed in England was Irish?—Yes.

6378. The preponderance was Irish?—Yes.

6379. Unblended whiskey, be it pure or patent still, has, I believe, ceased to hold the public taste as much as blended whiskey?—Certainly.

6380. The figures show that?—Certainly.

6381. Take your own firm. In your early days what was the proportion of the whiskey, Irish and

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Scotch, that you sold?—We sold about three vats of Irish to one of Scotch.

6382. For consumption here?—Yes, in England.

6383. When did you commence your blending?—When we came to London in 1871 we commenced the blending of Scotch whiskey, but it took some time to get it into the trade and into public favour.

6384. That was in 1871?—Yes.

6385. Did you carry on the blending as a fact in England or did you blend in Scotland?—We blended in Scotland.

6386. And sent it to England for sale?—Yes.

6387. Did you establish any particular standard of the blend?—No.

6388. How did you regulate your blending?—By what we considered was the blend of whiskey to suit the palate of the public at the time. The Irish whiskey having less flavour than the Scotch, we reduced the flavour and made it more palatable than an individual whiskey.

6389. I presume you had to follow the public demand, which meant the public taste?—Certainly, and we tried to educate the public.

6390. In what direction did that public taste go?—In the direction of a more silent whiskey.

6391. And silent means not so pungent?—Not so heavy, not such a heavy flavour; rather less flavour than the malt whiskies.

6392. As a matter of fact which would be stronger, the pure pot still or your blend?—The pot still pure malt would have more flavour.

6393. I used the word "stronger." It is a very unscientific term, no doubt, but which would have the greater intoxicating effect?—The strength of the whiskey would be exactly the same as tested by the hydrometer.

6394. Would they have the same intoxicating effect?—No, the one would be lighter. You could drink more of the blend than you could of a distinct whiskey.

6395. You could drink more without becoming intoxicated?—Yes.

6396. And if a man drank the same quantity of both, you think they would not both have the same effect as to intoxication?—No.

6397. Therefore according to your view the blending does produce a good effect?—Yes, certainly.

6398. And the public seem to think so?—Certainly; and it has been proved.

6399. From the time this process of blending first commenced, has the practice gone on increasing?—Certainly.

6400. In what direction do you blend? Do you blend pot still whiskey and patent still whiskey?—We blend malt whiskies, all pure malt made in different districts, and then we blend all grains. We blend all Campbeltown, all Islay and all Glenlivet, all Lowland malt, and all grain, and we use the proportion of each of these to get the whiskey that we consider, or I myself consider, will suit the palate of the English public.

6401. You feel the taste by, I suppose, the demand made upon you?—Yes. You test it, first of all, by the smell, the nosing of it, and then the tasting of it.

6402. As you have tasters in the wine trade, you have experts to taste the whiskey?—Exactly the same.

6403. What you think will please the public, I suppose, sometimes does please them and sometimes does not; but in the result you are able to tell what whiskey has suited the public best?—Yes, certainly. Different districts require different flavours.

6404. I gather from what you have said that you do blend the pot still malt whiskey with the grain whiskey in certain proportions?—Yes.

6405. Those proportions vary?—Certainly.

6406. Do you in all your blends always have some percentage of malt whiskey?—Yes, there is always malt in the blends, but there is not always patent still. There is always malt.

6407. What is the range between which your percentages go of the extent to which you have malt in your blend?—It would be very difficult to tell that. You may go from 10 per cent. of patent still up to 90 per cent. of malt, and *vice versâ*.

6408. Practically, giving me a rough average, what percentage of malt would there be?—It would a great deal depend on the price of the whiskey and the age. If it was a cheap whiskey you would have to put a greater percentage of patent still whiskey. If it was a high class whiskey, a dear whiskey, you would have less patent still in it.

6409. But let us reduce it to practice. Supposing you had a particular friend whose interest you considered all round—his health and everything else—what sort of a blend of whiskey would you make for him?—Anything up to 50 per cent. of malt and 50 per cent. of patent still. If I was drinking it myself I should prefer a blend of malt and patent still to a pure malt by itself.

6410. You have given us the reason that it has a mellower taste?—Yes, I should say it is better for you.

6411. I gather from what you have said that the lower the percentage of malt and the higher the percentage of grain the price falls?—Yes, the more patent still you have you can sell it at a less price.

6412. Take the case of one of your customers. If he is doing a high class trade you know the kind of whiskey to blend for him when he asks for Scotch whiskey according to his wants?—Yes, if we are supplying a first class wine merchant with a good connection he gets a much older whiskey and most likely it suits his customers to take more malt, whereas a publican, as a rule, has always two or three qualities of whiskey. He may start at about 3s., and he may go up to 11s. or 12s. per gallon in bond, according to the trade he does.

6413. With regard to this variation of quality of blended whiskey, does the original material, the class of cereal put into whiskey before being blended, affect the price?—A pure malt whiskey made from pure malt costs more money than the patent still whiskey made from malted barley and maize.

6414. But have you gradations in the different whiskey, the malt and the grain, according to the articles used?—Certainly.

6415. So you can get a very cheap whiskey?—Yes.

6416. Have you any knowledge of there being a demand for cheaper whiskies since the practice of tied houses came into existence?—I should say so, certainly.

6417. In the case of a tied house in the hands of a brewer he takes the whole of it?—The chance would be that he would have to take a cheaper whiskey.

6418. Sometimes the distillers themselves supply and sometimes they do not?—Certainly.

6419. What is the effect as a consumable commodity of those cheap whiskies? Are they healthy?—I do not know. I would not care to drink them myself. I should much prefer an older whiskey.

6420. And a different class?—Yes.

6421. Blended?—Yes, I certainly would prefer a blended whiskey, older and a higher price whiskey than you would get at certain public-houses.

6422. As you go up in scale proportion of the malt whiskey and get to 50 per cent., does that raise the price compared with when you only have 10 per cent. of malt?—Certainly. If you have 50 per cent. of malt and 50 per cent. of patent still it would be cheaper than if you had 70 per cent. of malt and 30 per cent. of patent still. The latter would be a dearer whiskey.

6423. And you charge it as a dearer whiskey to your customers?—Yes.

6424. But do you know enough of the practice that exists when we come to the publican, who all through has been getting his cheap whiskey for the reasons you have just given, and who, if asked for a glass of whiskey, may have a different class altogether? Does he charge the same price for this cheap whiskey as he would charge for the higher priced whiskey?—No.

6425. Are there gradations of price?—Certainly; they go from 2d. to 1s. per glass.

6426. Does that depend upon the name that is given to the whiskey so sold?—Certainly. If you go into a house and ask for a whiskey you would very likely say you wanted "special."

6427. In Scotland they know so much about their different distilleries, but here in England, take London, a man goes and says "I want a glass of Scotch whiskey." What more does he know?—He should know by his palate. He is in the habit of drinking whiskey and he would very likely leave it as not being satisfactory, and he would simply say to the landlord: "I want something better than that," and then he has to pay 4d., 6d., 9d., or 1s.

6428. Would he know anything about pot still or patent still?—No, he would not.

6429. And he would know nothing about distilleries?—No.

6430. Or the character of the blend?—No.

6431. So the publican can give him what he likes, subject to his saying "I do not like it"?—Yes, or if he knows the neighbourhood he would know where he could get the best whiskey.

6432. That is where the trade is controlled by the supply having to meet a demand according to taste?—Certainly. What has led to general blending has been that they could not give as good a whiskey, and the blenders then came, and the public now ask for a brand.

6433. We understand there are about 150 distilleries in Scotland, and I suppose almost every one of them makes whiskey according to its own idea?—Yes.

6434. Each one of those whiskies would run the chance of suiting the palate of the consumer. Is it an easier thing to find a whiskey that suits the palate by blending?—Certainly. I do not think there is any individual whiskey that suits the average man. Ninety-nine men out of every 100 would prefer a blend; the other man would prefer an Islay, and the other 99 would not look at it. The one man is accustomed to have a high flavour, but there is no doubt about it that a blend is not only milder but better for you than any individual distillery. Then there are different distilleries and each varies from another. Then in different seasons each make varies from the previous season owing to the malt.

6435. Now will you tell us what they make their whiskey of? In the first place you have the malt whiskey exclusively. Then you have your grain whiskey, that still is made from cereals only?—Yes.

6436. You do not admit that you ought to take molasses or any other substance for that grain whiskey?—We admit nothing except cereals—not rice. It is a question whether rice is a cereal, but I would not permit rice to be used.

6437. Some of the witnesses have said that the cereals should be grown in Scotland, but I think that contention has passed away?—Oh, no, you could not do that.

6438. You would admit maize?—Yes, any cereal except rice.

6439. You sell individual distillers' whiskies, malt or grain, and you also blend malts and sell all malt blends?—Yes.

6440. You blend malt and grain, and you also have grain whiskey blends?—Yes.

6441. That is the whole variation you can have?—Yes.

6442. For which of those blends is there the greatest demand?—The greatest demand is for blended malt and grain.

6443. From what you have gathered for yourself, and from what you have learned from your brother distillers, is that the whiskey you would recommend to be drunk?—Certainly, and I would drink it myself.

6444. This is not a question of profit with you, but it is your opinion?—Yes.

6445. Of course, you want to sell what there is the greatest demand for, but apart from that you are not interested as to which whiskey?—That is so.

6446. Now I want to get something practical from you. I do not think anybody suggests that patent still whiskey should not be used, and I do not think it is suggested that it should not be blended, but it is suggested that there should be a great deal more information given. Would you be disposed to make public the exact proportions of the blend that you make?—No, I do not think it would be fair.

6447. You treat it, I will not say as a trade secret, but a trade possession?—Certainly, it is one's business pure and simple. If everybody had to put on their label the exact proportions of grain and malt each one would know exactly the other man's business, which I do not think would be fair.

6448. The arrival at the blend that may be best is a work of experience, and a work, I suppose, sometimes of considerable duration, but then you do arrive at a blend which you do think is the best?—Yes.

6449. That has been accomplished by your practical experience in the trade?—Yes.

6450. If you put the proportions on the label then there would be no copyright or protection, but it would become general property, and every other seller of whiskey would be able to blend it as you blend it?—Exactly.

6451. I do not say it is right or wrong, but that is the view of the people you represent? They say publicity ought not to be put upon the trader who has worked his way to obtaining a good blend?—Certainly.

6452. That is your case, I think?—Yes.

6453. Assume for a moment that all these materials are pure cereals, and not deleterious in composition, what would be the advantage of telling the public consumer "This is 90 per cent. to 10 per cent.," and "This is 80 per cent. to 20 per cent.," so that he may know exactly what it is, unless it affects the price?—If there was 90 per cent. of grain and 10 per cent. of malt, and you reversed it, the consumer would not know any more than he does at present. He would know pretty well if it was the opposite proportions, unless you label the one 90 and 10, but to say it is a blend of malt and grain nobody would have any objection to.

6454. Take the ordinary whiskey that goes into a well-regulated household for the smoking room on the hillside after shooting. You sometimes see the age of the whiskey given on the bottle?—Yes, that is so.

6455. But at present there is nothing else except "Scotch Whiskey" and the age?—Yes.

6456. Is the majority of English whiskey that we see blended whiskey if it is marked "Scotch Whiskey?"—Certainly, I should say so. If you buy your whiskey from a wine merchant it would certainly be a blended whiskey. If you buy your whiskey direct from a distillery, and supposing you are up in the North shooting, you would very likely get your whiskey from the nearest distillery, that would be individual whiskey.

6457. But taking England, if they were to have the pure pot still whiskey would it startle the ordinary Englishman a little now, after experiencing the blended whiskey?—Yes, if he has been accustomed to drink the blended whiskey he would not like the pure malt.

6458. To your knowledge has that grain whiskey borne the name of "Whiskey" in Scotland now for a great number of years?—Yes.

6459. Sometimes it is called grain whiskey?—In Scotland in the olden days you would go in and ask for a glass of spirits and not for whiskey.

6460. You say a Scotch whiskey should be made in Scotland from cereals, and that pure malt whiskey should be made in pot stills from malted barley only?—Yes.

6461. Give me your knowledge of the Irish pot still whiskey. There is in Ireland some pot still whiskey not made from malted barley, is there not?—There are two or three whiskies made from pure malt in Ireland, the same as in Scotland. But the great majority of the distilleries in Ireland are what are called mixed grain—so much malted barley and so much corn and wheat and unmalted barley.

6462. Do you see any benefit or any advantage in causing such Irish whiskey to be designated accord

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ing to its composition?—I think if there is to be any designation of Scotch whiskey as a blend of malt and grain that it should also apply to the Irish pot still whiskey where the blend takes place in the mash tub, whereas we in Scotland make the whiskey entirely separate, we make our pure malt whiskey and our grain whiskey and we blend those whiskies afterwards, and the blends are made so as to give the flavour to suit any district or any palate. In Ireland in the pot still they use so much malted barley and so much unmalted grain in the mash tub.

6463. I want to know about this Irish pot still whiskey. We have received evidence to the effect that there is some Irish pot still whiskey not made from malted barley; would you have that designated so as to let the public know it was not made from malted barley?—Yes.

6464. What sort of designation would you suggest?—You would call it malt and grain.

6465. When it is not made from malted barley in the pot still, what is it made from?—When it is not made from pure malt it is made from malted barley and unmalted grain, unmalted barley and unmalted grain and unmalted rye. It is usually malt and corn, and there is sufficient malted barley to cause fermentation.

6466. What is the effect of the flavour on that when you have the unmalted cereal brought in?—It is an entirely different flavour. It is distilled at a much higher strength than the pure malt. Irish whiskey made in the pot still from malt and unmalted grain is sold at 25 degrees over proof, and pure malt made in Ireland and pure malt made in Scotland is sold at 11 over proof. The one is distilled somewhere about 30 to 50 and the other about 14 to 18 over proof.

6467. Have you any practical knowledge of the Irish distilleries?—Except that I have visited nearly every distillery in Ireland.

6468. But it does not come in your business?—No.

6469. You have told us that you much prefer a malt and grain blend. Have you had cases where, having delivered to your customers a pure malt, they have returned it to you and asked you to take it back and replace it with a blend?—When the prosecution took place at Islington it created quite a sensation among the public and people wanted a pure malt whiskey. Many of our customers wrote for pure malt and we had to duplicate every price that we had from about 3s. 6d. right away to 16s. in bond. We had to duplicate our prices with pure malt. We had dozens and hundreds of letters asking us to send it back and send the old blend—not pure malt. They have all gone back to the original blend they had before the prosecution at Islington.

6470. (*Dr. Cushny.*) Was the pure malt that you gave them newer?—Yes, it would be newer than the grain because you could use older grain. Your prices are fixed. It is not a question of the enormous profit on the malt and the grain, but you have a certain percentage of profit on all your whiskies which covers your expenses in London.

6471. (*Chairman.*) To what do you attribute the return of the pure malt—was it because it was pure, and therefore more strong and more pungent, or was it because it was newer?—No, they preferred the more silent flavours of the blended whiskey to the high flavoured pure malt. You cannot use pure malt as old, and you therefore use a very much older grain.

6472. (*Dr. Cushny.*) Do you think it was the newness of the whiskey?—No. The public do not like pure malt whiskey pure and simple.

6473. (*Chairman.*) We have had certain suggestions made as to certain designations that should be given to classes of whiskey in the course of its sale. Do you know of any designation of whiskey as it exists which, if made, would be advantageous first of all in the public interest?—I doubt very much if any description that was put on would be any benefit to the health of the public or any benefit to the public. People go into a public-house and ask for two pennyworth of whiskey, and the man who is selling that whiskey cannot tell you what is in it. It is impossible to put it on a glass. If you buy a bottle of whiskey with a brand on it the public know the firm's name is on it, and they depend on it. I do not think there should be any interference with the present arrangement with regard to selling and labelling the whiskey.

6474. Supposing you hold that the patent still grain whiskey is entitled to the name "Whiskey," if the patent still people are entitled to use the word "Whiskey," then *a fortiori* the pot still people are entitled to use it. Therefore the word "whiskey" would be a common designation for both?—Yes. I think whiskey is a spirit commercially known as whiskey. It is an article known commercially as whiskey. It is not alcohol, as the chemist would put it, but it is a spirit with certain ethers, and those ethers give the flavour to the whiskey. If you take rectified spirit it has no flavour, the ethers are all taken away. The chemist would say that these ethers were poison. We say it is impossible to take away sufficient of these ethers from a pot still to tell what it is. We say that is what gives it after it is kept a certain time in the wood that lovely bouquet that you have in old whiskey.

6475. Let us put the blend out of consideration for the moment. What would be conveyed to the public if they saw on the bottle from which the whiskey came "Pure Malt Whiskey" or "Pure Grain Whiskey?" What would that convey to an ordinary English drinker?—I do not think it would convey anything. He would simply take the one he was in the habit of taking, and which he liked best. The public know very well what they are drinking and what they like, and whether you name it pure malt or whether you name it grain they would prefer the blend.

6476. They know what they like, but they do not know whether it is grain or malt?—No, but I do not think it would make any difference supposing they did.

6477. If that is the only designation, grain and malt, the difficulty of designating the blend becomes greater still?—Certainly.

6478. As you say, you are unwilling in the interests of the trade now, as distinguished from the interests of the public, to publish the details of your blend?—Certainly. Every firm would object to the secrets of their business being given.

6479. It may be that the blend you have described is a secret?—Our firm, not ourselves alone, but every firm in the trade, have their own particular blend, and it is not fair for an opposing house to see somebody else's blend described on their labels. It is not fair for me to copy it or for somebody else to copy it.

6480. Does the name of the blender ever get attached to the whiskey?— Yes, it is the name of the firm that gives the people the guarantee that the whiskey is good.

6481. That is not what I mean. We have heard of Glen Livet whiskey and Jameson's whiskey, and so forth. Does the blender's name sometimes adhere to the whiskey so as to give it a high character?—If you had a blend you would not have the distinct whiskey at all. It would be a Glen Livet blend, but it would not be one distinct whiskey.

6482. If you discovered a particular blend that you thought was perfection, would that be called Greenlees whiskey?—Yes.

6483. By virtue of your blend?—Yes, it would become to be known as Greenlees whiskey or Greenlees blend.

6484. Has that come into existence?—Yes.

6485. The blend character?—Yes.

6486. What are the cases in which the blend characters come into existence?—We have repeated names, but each firm's name is known with it. People go and ask for Greenlees whiskey or Buchanan's whiskey, or Walker's whiskey, and they get it.

6487. But do they ask for it by virtue of the name of the blenders' firm?—Yes.

6488. I must not ask you which are the most eminent, but there are blenders whose names you can give?—Yes, I can give you a dozen.

6489. I do not know whether you are quite impartial as between the public and the trade, but have you had suggestions made to you whereby the public would benefit by these declarations being made before they bought?—No, I do not think it would make any differ-

ence to the public whether it was labelled or whether it was stated exactly on the label.

6490. With regard to the prices of the whiskies, we know they vary very much both in the quality of the same whiskey and the variations in the different classes of whiskey?—Yes.

6491. The public ought to be protected from paying more or paying the same price for a cheap whiskey that they pay for a dear one?—If you take six or twelve of the best known brands in England, whiskey sold to the public at 42s. a dozen (3s. 6d. a bottle), or at 48s. a dozen (4s. a bottle), each firm has a 3s. 6d. whiskey and a 4s. whiskey, and these whiskies are to all intents and purposes worth about the same money to the middle man who sells them. The cost of that whiskey would not vary 2d. a gallon between any 12 blenders. I can give a whiskey that the retailer would sell for 42s. The public is not losing. The public is getting good value at 42s.

6492. I want to get upon the Notes the quantities of the materials that are employed in the manufacture of Scotch whiskey. Would you hand in those figures?—Yes.

	Malt. Cwts.	Unmalted Grain. Cwts.
The 150 distilleries in Scotland used	2,517,330	1,336,611
The 28 distilleries in Ireland used	674,169	1,198,959
The 8 English distilleries used	262,098	735,388
	3,453,587	3,270,858

But in addition the English distillers used:—

Molasses	982,569 cwts.
Glucose	2,903 „
Sugar	345 „
Other materials	8,059 „
Total of of materials other than grain.	993,876 „

6493. Where did you get your returns from?—From the Blue Book that is published by the Inland Revenue.

6494. Is it published annually?—Yes. Anyone can go and buy it.

6495. There are 150 distilleries in Scotland using malt. For what period is this?—It would be up to the 31st March, 1907. It is the last published Blue Book.

6496. 150 distilleries in Scotland used 2,517,330 cwts. of malt, and 1,336,611 cwts. of unmalted grain. The 28 distilleries in Ireland used 674,169 cwts. of malt, and 1,198,959 cwts. of unmalted grain. Then the eight English distilleries used 262,098 cwts. of malt and 735,388 cwts. of unmalted grain. The result is very nearly equality—3,400,000 cwts. of malt, against 3,200,000 cwts. of unmalted grain?—Yes.

6497. Then in the English distilleries there is an item of 982,569 cwts. of molasses, and there are other small quantities of other materials?—That is so.

6498. Do you recollect at this moment with regard to the 150 distilleries in Scotland whether the pure malt distilleries are confined to the larger distilleries, or is it generally all over Scotland?—The malt is all over Scotland.

6499. As it stands at present, the malt is a very much greater consumption, but does that also represent the distinction between pot still and patent still?—Yes. In this figure of malt the Inland Revenue do not separate it. In this two million and a half cwts. there is the quantity of malt used in making patent still whiskey.

6500. That is making whiskey both in the patent still and in the pot still?—Yes. It is about 30 per cent. of malt in making grain whiskey.

6501. Are you anxious to get rid of the distinction, when the whiskey is sold, of Scotch whiskey and Irish whiskey, and retain the name of "Whiskey" only, or would you still keep the distinction of Irish and Scotch?—I should say that all whiskey made in Scotland should be Scotch whiskey, and all whiskey made in Ireland should be Irish whiskey, and that all English spirit, if made from cereals in England, should be called English whiskey.

6502. If we are to say there is to be any designation would you object to whiskey made in England being designated Scotch or Irish?—Certainly, I should.

6503. Should the publican or the person who is selling have the obligation cast on him to tell the customer whether it was Scotch or Irish?—Certainly, the public should know whether they are getting Scotch whiskey or Irish whiskey and not English spirit.

6504. If a person goes in and says: "I want whiskey," and does not ask for Scotch or Irish, is the publican to say: "Which will you have?" or is he to do as he likes without asking?—To do what he likes. But the public generally ask for Irish or Scotch. If a man went in and asked for "Whiskey" the publican would very likely give him what he had most of—either Scotch or Irish.

6505. (*Dr. Horace T. Brown.*) It might be English?—No, because I do not think there is any English whiskey made from cereals.

6506. (*Dr. Adeney.*) We have had it suggested that there is some whiskey sold as Scotch whiskey which is made in London?—There is English spirit sold as Scotch and Irish whiskey and blended. There is no doubt about it.

6507. (*Chairman.*) Irish whiskey is not made in such large quantities as it was?—No.

6508. Therefore there is not such a demand for it as there was?—No, not as there was 20 or 30 years ago.

6509. What do you say as to the propriety of having a close time for whiskey during which it shall not be sold?—I have no objection whatever to an age limit being put on. The difficulty comes when you pay duty on it. If you make it two or three years I have no objection to it myself personally.

6510. Would you say that first as regards both the classes of whiskey, patent still and pot still?—Yes.

6511. Would you have the same period of prohibition for both of them?—If you said that no Scotch whiskey or Irish whiskey should be allowed out of bond till it was two years old, either grain or pure malt.

6512. Your limitation would be the same, two years?—Either two or three. I do not mind saying three.

6513. What would be the advantage to the public in that?—The advantage to the public would be that the seller must guarantee his whiskey to be at least three years old.

6514. And it would be healthier?—It would be healthier.

6515. And more suitable to the palate?—Certainly. The older it is the better it is for you.

6516. But *prima facie* there would be a loss of capital to the trader?—Yes; it is in favour of the larger capitalist.

6517. But he gets a better article to sell?—Yes.

6518. Upon which he would be entitled to charge a bigger price?—An extra profit.

6519. So he would get back that capital, which is not to be employed for three years, by the increased price?—The age of whiskey at present sold is very much more than two or three years.

6520. What is about the average?—I do not know that I could give you that with any degree of certainty, but I could give you my own figures. Over four to eight years old it would be about 75 per cent. But there is a large quantity of other whiskies which we sell to wine merchants and brewers new which they keep in bond to mature.

6521. You say 75 per cent. would be over four years old or older as you sell it for consumption?—It would be over four years.

6522. When your customers write to you, do they ask for either particularly old or a given number of years' old whiskey?—As a rule they generally order whiskey at a certain price, and according to our price list they have got the age of that whiskey.

6523. They have your price list?—Yes, with the ages of our whiskey opposite each blend, and they order a whiskey at a certain price.

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6524. You have something to say as regards foreign spirit. Is there any whiskey imported into this country or something which is called whiskey from abroad now?—Yes, there is a large quantity of German and Russian spirits.

6525. What do you say first as to composition? Do they at all follow our whiskey?—No, they are not whiskey at all; they are made from beetroot, and potatoes, and roots, and chemicals. They get the fermentation by chemicals and use roots.

6526. They do not come within your definition?—No.

6527. Where does their name of "whiskey" come from? Is it taken in order to compete with our real whiskey?—It is taken to compete against our Scotch and Irish whiskey.

6528. Is the name given by the importer here, the Englishman?—It is given by the Englishman when it comes in here, but there was a large quantity of this foreign spirit used for methylation.

6529. Do you say that it should be prohibited altogether?—It should be prohibited altogether being sold as whiskey. You could trace it by the Customs and Excise.

6530. If it comes in under a proper name you could not prohibit the importation of it. What you mean, I think, is that, when the English owner tries to sell it, he should not be allowed to sell it as whiskey?—Yes, certainly, that is what I say.

6531. We must find some machinery for that?—First of all, it would come into the Customs and would have to be passed out of the Customs with a document saying "This is German spirit." You would follow that permit wherever it went. Supposing a publican bought a puncheon of this spirit he would have to show where it went to.

6532. Would you have anything approaching an analyst's proof showing that it did not come up to your standard?—No, you would simply trace this spirit.

6533. You must have some test. According to you everything that came from abroad ought not to be sold as whiskey whatever its composition?—But supposing you trace this to a man, according to his books he must be able to show what he has done with it Supposing a publican bought a cask of German spirit?

6534. As you say, it no doubt is the case that German spirit does not come up to our definition of whiskey. But supposing a person comes and says: "We are making it from grain," you must test that statement and give him an opportunity of showing it is so unless you say that everything that comes from abroad is not whiskey?—I have not considered that question yet, but knowing German and Continental spirits at present, I say they are not whiskey at all.

6535. You take things as they are now?—Yes.

6536. But there would be practical difficulties?—Yes, there would be a difficulty if they were made from malt. They might make pure malt in Germany.

6537. As things are at present you would have certain permits to be used by the Customs or by the Excise, and you would provide that the persons to whom it is sold should have a copy of that permit?—Yes.

6538. And be answerable for selling whatever it may be in accordance with what is designated in the permit?—Certainly.

6539. I believe you are disposed to set your lance against the analysts? You do not think much of them?—I do not.

6540. I will let Dr. Brown deal with that?—I do not believe it is possible—in fact, I am positively certain I could make up a blend in my place and the analysts would not be able to tell me anything like what the proportions of it were. They would give a certificate that it was most beautiful old mellowed whiskey with a large percentage of grain whiskey in it.

6541. (*Dr. Horace T. Brown.*) You have already given us some particulars in your *précis* of evidence of analyses of whiskey that you have had made. I have not had time to look into them very carefully. Will you kindly describe what you have referred to in your *précis* on this subject?—I have no faith whatever in any analysts' reports upon whiskey, and I consider that retailers should not be convicted in any criminal court upon such reports. As you know, it is always a criminal prosecution. I am not a chemist myself, but I give three analyses of the same whiskey by three chemists which are entirely different.

6542. Are those what you referred to as A, B and C?—Yes.

6543. Identical samples?—Identical samples.

6544. As you are aware the results depend to a great extent on the method of analysis?—I am not a chemist at all.

6545. You do not know what methods were adopted?—No. They must be entirely different, because the results are entirely different.

6546. They are expressed in different terms?—They give the higher alcohols in different proportions. In one case one analyst gave 155·5, and in the other case another analyst gave 243·3. Then for acetic acid one analyst gave 24·9, and another analyst gave 19·7. Then with regard to C, you cannot compare that with the others, because it is a different thing altogether. I say it is quite possible for a chemist to take a blend of pure grain and pure malt whiskey and he will give you entirely wrong proportions. He cannot give you the proportions.

6547. (*Dr. G. S. Buchanan.*) He might say it was all malt?—He might. Here is one of them saying it is all malt. He says: "These figures are such as are obtained by the analysis of good malt whiskey of considerable age."

6548. (*Dr. Horace T. Brown.*) I will put the question in another way to you. Assume for a moment that the analyst had a method which was capable of giving constant results in his hands, and in the hands of other analysts, do you think it is possible at the present time to establish an analytical standard which would differentiate, in the first place, grain whiskies from malt whiskies, and, secondly, blends of those from malt whiskies?—No. Supposing he takes one individual pure malt whiskey and a blend of pure malt whiskey he cannot tell which is the individual and which is the blend.

6549. You mean that no standard is possible?—I do not think so. I am not a chemist, but taking whiskey as what I call it, with the ethers and everything else in it, I do not think it possible for a chemist to do it. I knew Mr. Allen, of Sheffield, very intimately, and he tried all he could by his process, but it is a most difficult thing. A chemist as a rule goes for pure alcohol. We do not consider whiskey a pure alcohol at all. We say it is a commercial article known as whiskey.

6550. That is scarcely a fair way of putting it. The analysts, in these cases, have not given you pure alcohol, but they have attempted to establish a standard of the so-called impurities?—They are impurities from a chemist's point of view, but I do not call them impurities. They have tried the same thing here but they have never got hold of it. They have never been able to get a bottle or a gallon of these furfurals, or anything like that. They never can get a gallon or a bottle of it, or sufficient for them to take and analyse it.

6551. Just refer once more to your definitions. I am not quite clear from your *précis* what is exactly your position with regard to the matter. You state "Grain whiskey, having been made in the same form of patent still in Scotland for 78 years, and sold as grain whiskey, it cannot now be designated by any other name." Do you mean to say by that that a grain whiskey has no right to be sold simply as Scotch whiskey?—Yes, it must be Scotch if made in Scotland. A patent still whiskey made in Scotland and sold as grain whiskey could not be designated by any other name than grain whiskey.

6552. But you would allow the patent still whiskey to be sold as Scotch whiskey, would you not, without the designation?—Yes, without the word "grain." Here are labels we have put on for this purpose. (*Producing several labels.*) One is all grain and one is all malt. The still shows the designation and the two stills together shows the blend.

6553. (*Dr. G. S. Buchanan.*) You were speaking of the use of analyses. Have you any experience of utilising analyses for the purpose of checking whether a given blend of whiskey, a bottle whis-

key of the same character year in and year out, has been tampered with or adulterated by the retailer?—No, we have no experience of that. We can always tell, in the case of a bottle of our whiskey, if the cork is drawn and the bottle is filled up by a tap whiskey.

6554. You can tell that by the taste?—Yes, without analysis at all—better than analysis.

6555. Could you do that to 10 per cent.?—Yes, I think you would. It would not be worth the man's while to take the trouble to fill the bottle unless he put in 50 per cent.

6556. If the analyst was able to come to your assistance in that matter I suppose it would be a useful thing for the trade?—We should be delighted if we could find an analyst who could tell us—not only on the question of selling, but there are various things that arise at different seasons in whiskey, and we would give anything if we could send our whiskey to an analyst and find out why it differed this season from the last. We have to go on and say it is the barley or the sun. We should be delighted if we could find a chemist who would show us satisfactorily that he could tell us within 5 per cent. with a blend of 50 per cent. that there was a grain whiskey in it.

6557. But my question is whether it would not be at the present time a feasible business, in the case of a standard blend or standard whiskey of the same characteristics year in and year out, to detect small but significant deviations from that particular quality?—You mean in the case of a retailer filling it up.

6558. By a chemist knowing the analyses of the genuine article at different times, and then by having these to compare with the exceptional sample?—We should be delighted if we could find a chemist to do it, but we have tried every chemist we could lay our hands on. I had Mr. Allen, of Sheffield, years ago going through every one that we sold, and testing every one, but he never could tell. If we could get one who could do it we should employ him regularly. It is the most difficult thing in the world to keep the seasons regular.

6559. You said your custom was to make a number of blends of whiskies of some particular locality and quality, that is to say, a number of blends of Highland whiskey, and so on?—There are 20 distilleries in Campbeltown. I am very sorry the Commission could not go and visit Campbeltown, because it would have been very interested. There are 20 distilleries within half a mile of one another. The whiskies of all those distilleries differ to a certain extent although they are made exactly the same way. Two distilleries next door to one another will make a whiskey of a different flavour.

6560. But Campbeltown whiskey as a whole has a general character of its own?—Yes, but the different distilleries vary. We blend them and put them together.

6561. Can you tell me whether the main object of that is to get a particularly excellent quality of Campbeltown whiskey by the blending, or is the main object to place your orders with a sufficient number of firms?—No; certain distilleries have more flavour than others, and you get at a fair average Campbeltown whiskey. In the Glen Livet district the produce of six or eight or twelve Glen Livet distilleries all put together will make a better whiskey than any distinct Glen Livet whiskey—a more regular whiskey.

6562. You were telling the Commission about the declaration of the proportions of grain and malt whiskey in blends. Would the mere declaration of the proportions, so much grain and so much malt, give away any trade secret at all?—It would not give it all away.

6563. Would it give any of it away?—It would give the other houses the opportunity of getting near the quantity of grain, and then they could build up other whiskies.

6564. The mere statement so much grain and so much malt?—Yes.

6565. Notwithstanding all these elaborate blendings from different distilleries?—It would assist considerably. You would not get at it exactly, but it would assist considerably.

6566. I gathered from you that you thought 50 per cent of malt, or over, represents a rather better character of whiskey than under 50 per cent.?—Yes, but it would all depend on price.

6567. Do not you think it would be some advantage to the consumer under those circumstances if he did know that a particular blend contained above or below 50 per cent.?—I do not think so. They would go for the blend that they would prefer. Supposing you sold another one of 60 and 40 they might prefer that one.

6568. You would have them trust the blender entirely?—I would. They would trust the blenders to buy the best quality and blend it in the best way they possibly could, and sell the oldest and best whiskey they possibly could to the public.

6569. You do not consider the public would benefit by any description?—I do not think so. I do not think they care anything about it.

6570. Is not that against the tendency of recent times?—I do not think so. I do not think the public care. They like the whiskey of the flavour that pleases them.

6571. Is not the same thing urged whenever any question of that sort arises? For instance, with regard to the description of butter, or margarine, or coffee, or chicory, exactly the same argument is invariably used: "Trust the trader"; and the trader might in a great majority of cases be trusted, but at the same time the tendency surely has been to require that the customers and the public should be informed when there are distinctions and corresponding differences in quality or differences in price?—Certainly. It is easier to analyse butter and various things of that kind than it is to analyse spirit.

6572. You should ask a butter analyst on that subject. Now one question about the publican. Do I understand that the publican generally buys his whiskey ready blended?—Yes.

6573. You, for instance, in your firm would supply blends at a particular price?—Yes.

6574. He does not buy grain whiskey to blend himself?—You mean the publican?

6575. Yes?—He buys the blend.

6576. He does nothing to it but sells it?—He adds water to it to reduce it.

6577. Can we take the case of a brewery company? Does the brewery company buy grain and malt whiskey for blending on the brewery premises?—In some cases, but the great majority will buy blends.

6578. And issue it to their houses in the same form that they get it?—Yes, presumably.

6579. Do they sometimes deal with more firms than one?—Yes, and a wine merchant may do the same. He may buy it from two or three blenders and blend the blenders' whiskies in such a way that suits his customers.

6580. I do not know whether I followed you rightly, but I gathered that you said the different prices of whiskey as sold at a public-house would correspond to particular differences in quality, and there would be more malt whiskey in the higher price than in the lower price?—Certainly. A price was given in some of the evidence before the Commission. It was calculated that a man got paid so much for whiskey that he sold for 2d. and so much for whiskey he sold for 3d., 4d., and 6d. The witness was calculating that that was all the same class of whiskey. A man who sells a 4d. or 6d. whiskey to people would not get them to drink the 2d. or 3d. whiskey.

6581. But there is a class of publican's whiskey that you do not regard as exceptionally high class?—No. If you go and ask for two pennyworth of whiskey you cannot expect to get much. If you pay 6d. you expect to get a decent whiskey.

6582. But at the ordinary price at which it is sold, say 3d. a glass in London, do you think you can always trust the person behind the counter to give you a good quality?—You would get one of the blending firm's blends for 3d.

6583. You know of the custom of putting notices in public-house bars stating the fact that a spirit is diluted, or a spirit does not profess to be what it may be thought to be?—There is a bill in public-houses which says: "This whiskey is diluted," and

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that prevents the publican being prosecuted if it is below 25 degrees under proof.

6584. I ask you that because in your *précis* of your evidence I see that you take a strong objection to any description being given to the customer over the counter?—I have no objection to doing it, but, as I think I say in my *précis*, it is almost an impossibility to do it.

6585. But the publican does take the trouble to do it?—If there is a bill intimating that "spirits sold at this establishment are diluted" that is to prevent the question of the whiskey getting below 25 under proof and leaving the publican open to prosecution. You could hardly have a bill in a public-house saying "this is a blend of so much grain and so much malt," because it would not apply to his different brands. He might have a blend of 75 per cent. malt and 25 per cent. grain, or a blend of 25 per cent. malt and 75 per cent. grain, and this notice could not apply to them all. The public would not pay him 6d. for a cheap whiskey.

6586. (*Dr. Adeney.*) I have been asked, first of all, to put some questions on behalf of Mr. Guillemard, who unfortunately is unable to be present here this morning. Assuming the same materials were used, would there be any marked difference in characteristics between English, Scotch and Irish spirits made in patent stills?—Yes, certainly, there is a considerable difference between all the grain whiskey distilleries in Scotland. The water has a great deal to do with it.

6587. Using the same materials?—Using the same materials within a quarter of a mile of each other. I know great differences in two distilleries I have got to deal with and each year it is the same. That is one position where the blending comes in. Each season's distilling is different from the other on account of the malt.

6588. How would you describe that difference?—In flavour. It is wiser to use whiskey of certain different years rather than all of one season. Some seasons you will get very fine barley malt and sun dried perfectly. Another season like last the barley is not nearly so good. It does not give you the same produce, and it is an advantage to blend the different seasons.

6589. Would you say those differences were marked?—Yes. The difficulty is to test it. We have to keep it in mind that it is the year before. The whiskey is a year older and you are testing it against the next year.

6590. Could any real objection be raised to blending patent still spirit made, say, in Scotland with spirit made from similar materials in England or Ireland?—It would all depend on the water. They tried to make whiskey in Wales, but it was a great failure. It is the water to a very great extent which is so important with regard to whiskey.

6591. Do you mean they could not make a patent still whiskey in Wales?—Oh, yes, you could; but that was a pot still. Welsh whiskey was never any good although the Welshmen tried all they possibly could to sell it; they could not sell it at all; the public would not drink it.

6592. Would you prohibit the blending of English, Scotch and Irish spirits in bond?—I should object to English, Scotch and Irish being sold as Scotch, or English and Scotch being sold as Irish.

6593. You would prohibit it?—Yes, I would prohibit the blending of English spirit with Scotch and selling it as Scotch whiskey.

6594. Would your opinion be acceptable to blenders generally?—Yes, certainly, I think every blender would agree with me.

6595. Seeing that molasses and other materials have from time to time and for many years been largely used in Scotland in the manufacture of what was presumably treated as "whiskey," is your proposed definition of "whiskey" wholly justified by the history of the subject?—When has molasses and glucose and sugar been used largely in Scotland?

6596. We have had some evidence to that effect?—At one time they tried something, but only as a sample. But how much molasses has ever been used in Scotland? In what Blue Book is it? I should be delighted to look it up, because I have not seen it. This Blue Book is a public book that anybody can buy, I suppose.

6597. Your definition would exclude whiskey or spirit made from such things?—Yes, most decidedly. I say whiskey, either Scotch or Irish, is a spirit made from cereals only.

6598. With regard to the sale of German spirit as whiskey have you any real knowledge as to the extent to which that is done?—No; it is impossible to know it. It is all duty paid. You have to pay the duty on it; you cannot blend it. No blender could blend German spirit and Scotch spirit.

6599. You are under the impression it is done?—I have no doubt it is done. You have to follow it, but I believe it is done and it is done duty paid.

6600. You have some reason for believing it?—You could not take it as evidence because I could not swear to it.

6601. Seeing that spirits sent from bond for consumption are more generally removed to dealers than to retailers and that any preparation of German spirit for sale as "whiskey" would most probably be done at the dealer's premises, of what real value would a reference to the Inspector of Food and Drugs be?—They would follow it by a permit, and then the retailer's book would show it was German spirit, and he would be asked what he had done with it.

6602. Would that be practically possible?—It would give the Excise or Customs a lot more trouble, but it would be practicable.

6603. You could not do it by the existing machinery?—Yes, you could, but you would require more officers, because every retailer's premises would require to be visited much more often.

6604. If there were a minimum time limit with regard to the bonding of spirits for consumption, how would you deal with spirits for rectifiers, and manufacturing chemists?—That is one of the difficulties, and it is the same with gin. The difficulty comes in when you begin to limit. How are you going to let it out for making gin? It is no advantage to keep the spirit you rectify to make gin. That is one of the difficulties you would have to follow if you had a time limit. I have not the slightest doubt but that it could be got over, but that is one of the difficulties.

6605. Now I should like to ask you some questions on my own behalf. You say in your *précis* of evidence: "Irish whiskey unblended, which formerly held the taste, gradually declined in public favour." Is there any practice in blending Irish pot still whiskey at the present time?—Yes, a very large practice. Any Irish whiskey we sell we have always blended for the same reason that we blend Scotch whiskey.

6606. Does that extend to Jameson's whiskey and Power's whiskey?—Yes.

6607. That includes Dublin pot still whiskey?—Yes, we blend them all for the same reason that we blend Scotch. The flavours in Dublin and Cork are all of a different character, and we blend them together and sell Irish whiskey as a blend.

6608. You sell that as Irish whiskey?—Yes, certainly.

6609. Have you a considerable sale?—Yes.

6610. (*Mr. G. S. Buchanan.*) Do you always blend Irish patent still spirit with that?—Yes.

6611. Not Scotch?—No. We sell Irish whiskey made in Ireland and Scotch whiskey made in Scotland, and we treat the patent still and malt exactly the same.

6612. (*Dr. Adeney.*) You made a remark with reference to a question the Chairman asked you as to the fall in the Irish trade and the rise in the Scotch blending trade, and you referred to educating the taste of the English. What did you mean by that?—By educating the public up to a blended whiskey of a pleasant description.

6613. Is it not fair to say "down to a blended whiskey"?—No, educating it up, most decidedly.

6614. You did not wish to give the impression that that was educating the taste to a cheaper whiskey?—No, the other way about. That is one of the things that has come out. There has been a lot talked about blending, as if it was a crime. I do not see how it is a crime. The Scotch whiskey trade at the present

moment, if it had not been for the blender, would never have been in the position in which it is. It was educating the public up to a real Scotch blend which was pleasant and nice, and everything else.

6615. And which could be retailed to them at a reasonable price?—Yes.

6616. (*Mr. J. Y. Buchanan.*) They would not drink pure pot still whiskey?—As a rule they do not. If you are shooting up in the North you could drink there the whiskey that is made in the district. If you are in Islay you can drink it and enjoy it, and Jura the same, but when you come to England with your different habits you cannot drink the same oily whiskey of the North as you can in the Highlands when out in the fresh air.

6617. (*Dr. Adeney.*) I quite follow the evidence you have given us on the ground of what I may call legitimate blending, but what troubles me is this—how to protect the consumer from bad blends: that is to say, blends of new whiskey?—That is where the Commissioners' difficulty will be. It is a very difficult point.

6618. You refer to your grain whiskies as being valuable to mix with your malt whiskies. Do you refer to the highest graded of grain whiskies?—Yes, all the grain whiskey made in Scotland is very good and very pure.

6619. Is it possible to sell in an unblended condition all grain spirits produced in Scotland?—Yes.

6620. Is it done, as a matter of fact?—Yes.

6621. Is there a trade in that?—Yes, there is a trade here. I have produced a label here showing nothing but pure grain whiskey.

6622. That is not any picked grain spirit?—No, it is a blend of the grains. You get the grains better by blending them, the same as you do malts.

6623. In other words, grain spirits vary considerably?—There is nothing like the difference in them that there is in the malts.

6624. But they do vary?—Yes.

6625. I suppose, for the protection of the consumer, it would be impracticable, in your opinion, to put a minimum limit on the amount of malt in a blend so that it may be legally termed a blend?—Yes, I think it is far better to be left alone. Let the blender and merchant supply the middleman with the best article he possibly can, and the competition would keep it.

6626. You base your definition of whiskey upon the materials—the cereals?—Entirely.

6627. Malted and unmalted?—Yes.

6628. But you exclude rice?—Yes.

6629. Why include maize?—I think rice is an entirely different thing.

6630. Rice is a cereal?—Yes, I know it is, but that is a difficulty. If it is a cereal, I leave it out because they make a spirit in India out of rice which is nothing like the spirit made from maize.

6631. Your definition would require a little limitation?—No, because I say the only thing required is unmalted grain. It would not come under a grain, and there is no rice used in Scotland. I had it in my *précis* "Rice excepted."

6632. I only wanted to know what was the reason for including maize if you excluded rice?—I think they are entirely two different things. The maize will make good spirit and the rice will not.

6633. It will make a good patent still spirit?—Yes.

6634. But it will not make a good pot still spirit?—I do not know that it has ever been tried.

6635. They have tried in America?—I do not know. You can make it in the pot still.

6636. You would not be inclined to confine the word "cereals" to cereals indigenous to the United Kingdom?—You could not supply it. Where would Scotland be? You do not grow sufficient barley in England or Scotland to supply anything like the quantity they want. Take a season like last season. Three quarters of the distilleries would be closed.

6637. That definition would not limit you to British grown barley?—Take barley at the present moment. Scotch barley is not nearly so good as foreign this season. Sometimes it is very much better. Why keep out the Danish Chevalier barley?

6638. You would not keep that out under the head of "cereals indigenous to the United Kingdom"?—I thought you meant grain.

6639. Is there any real reason except the question of cost for including maize?—You could grow maize in this country, but it would not pay. The Americans grow it so much better and send it over so much cheaper than we could do it.

6640. What I want to get at is why maize is used in patent stills in this country. Is it entirely a question of cost of production?—To a certain extent it is, and it makes a very good spirit. It is cheaper.

6641. The chief claim is that it is cheaper grain?—No, it would make as good whiskey as corn.

6642. It is cheaper?—You have a very much bigger market to get it from.

6643. With regard to your definitions of Irish pot still whiskies you would require them to be designated as malt and raw grain. That strikes me to be a little unfair?—I withdraw the word "raw grain." It is simply grain malted and unmalted. It would require to have some designation as Scotch—a blend of malted and unmalted. This word "raw" has got into my *précis* somehow.

6644. You used the word "grain" for defining your patent still spirit. You call that a grain spirit. If you use the word "grain" with reference to Irish whiskey you immediately introduce a suggestion of patent still?—Oh, no. What I mean is this, that in Scotland we make our malt whiskey in the pot still and we make grain whiskey in the patent still, and we blend the two together after they are matured. In Ireland you have a pot still, and in that mash tun you blend the materials—not the manufactured article after it is finished, but you blend the malted barley and the unmalted grain. It makes all the difference.

6645. That is not for the same purpose. I suppose you as an expert taster would agree there is something essentially different between the Irish pot still whiskey and the Scotch pot still whiskey?—Yes. Pure malt whiskey made in Ireland is very much the same as Scotch. You can hardly tell the difference. Of course, Irish pot still must be different because you have so much unmalted barley and unmalted grain in it.

6646. It may be possible that the Irish pot still distiller uses raw grain for the purpose of obtaining a certain flavour?—If he uses unmalted grain in his pot still.

6647. That has been his practice for many years past?—Yes, it has been.

6648. And it entails upon him a very costly process of distillation?—I do not think so. His process is exactly the same as the Scotch pot still.

6649. Have you seen an Irish pot still?—Yes, but it does not cost him any more to make it.

6650. You know, of course, there are at least three distillation processes in the Irish pot still and only two in the Scotch?—The difference in the cost is very little.

6651. I did not gain that idea from the evidence as to the difference of cost between the pot still and the patent still method of distillation?—I do not think there is much difference in the cost. I am not an Irish distiller, and have not gone into that.

6652. But you have put it in your *précis*?—If Scotch malt and grain are to be designated as so much malt and grain on the bottle I say the Irish should have the same, because it is unmalted grain.

6653. It is a new proposition to me coming from Ireland that Irish pot still whiskey should be known in any other way than it has been known for many years past?—You may call it pot still, but you cannot call it pure malt.

6654. No, I quite agree?—It is a blend of pure malt and grain in Scotland, and, therefore, it should be the same thing in Ireland.

6655. I cannot quite agree that the two processes of blending are similar in character or with regard to the objects to be obtained. You said that there is the same tendency which has been experienced in the English trade with regard to Scotch malt whiskies observable with regard to the taste for Irish pot still whiskey. Now, we have had a witness, a gentleman well known in Dublin, who gave us evidence some little time ago, and he said that so far as his knowledge

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was concerned it was impossible to get good Irish whiskey in London generally, and that when his English friends visited him and he gave them what he considered Irish whiskey they drank it with great pleasure and regretted they could not get it in London?—Many a Scotch friend tells me he cannot get a glass of decent Scotch whiskey anywhere in London. Hundreds have told me that.

6656. Is that the fault of the blenders?—I do not know at all. It simply means this, that he does not enjoy it so much in London as he does in Scotland.

6657. Do you know from your own personal experience whether the blending of Irish pot still whiskey is being carried on largely in the English trade?—It is a very large trade.

6658. Then with regard to this blending of spirits with patent still spirit, do I gather from you that the chief object is the reduction of the cost price?—No, I do not think the object is the reduction of price. It is not the fact of getting a profit. You give a better, a more palatable and pleasanter article for a less sum, but not to make it a matter of profit.

6659. (*Dr. Horace T. Brown.*) Would you still use the grain spirit in your blend if it were dearer than pot still?—Certainly, for a certain purpose of putting them together.

6660. (*Chairman.*) You get the softness?—Yes. You take away the general character of the malt if it was all by itself. It puts them together.

6661. (*Dr. Adeney.*) I am more concerned now with the poorer qualities of blends that the ordinary customer in a public house gets. I may take it that the patent still spirit there is used practically for the purpose of producing cheap spirit?—Yes. Probably the best thing would be if you could put a limitation on, and if you said that no whiskey was to be sold under 6s. a gallon.

6662. Would that be a perfect protection?—It would be bound to be—leaving the blenders to do what they liked.

6663. You yourself said you would not drink these blends of new spirit?—No.

6664. Why do you say that?—Because I do not like a new whiskey.

6665. It is simply a matter of flavour?—It is simply a matter of flavour. I do not think it would do me any harm but I would not enjoy it.

6666. Have you any opportunity of observing the effects on different consumers of these new and matured spirits?—No. If I drink a whiskey and soda or whiskey and water I take it because I like it. If I had to drink perfectly new very common spirit I think I should do without it.

6667. Not from the fear of its after effects on you?—No, not from the fear of it doing any harm, but because I would not enjoy it.

(Adjourned for a short time.)

6668. (*Dr. Adeney.*) Before we adjourned I was going on to the question of analyses, but before doing so I want to put to you a question about your blends of Irish pot still whiskies. Could you give us any idea of the age of the Irish pot still whiskies you use?—3, 5, 7, and 10 years.

6669. Which would predominate? Would the 3 years?—In consumption I should say no, and I should say that the 5 years would predominate—it would be between the 3 and the 5 years. Perhaps the 5 years would predominate.

6670. I only wanted to make a brief remark about the analyses which you quote and which you very properly say are not consistent. I should like to point out that they augment some evidence which has been given to the effect that at present it is impossible to depend upon any chemical standard for the classification of whiskies, but I take it from you it would be of value if we could. You do think it would be of value if official methods of analysis were known, the results of which could be depended upon?—Yes, of enormous value; all blenders and all distillers would be delighted if there was a principle that could be shown to be correct.

6671. I ask you this question because Dr. Schidrowitz handed in a paper to us during his evidence in which I see he refers to the desirability of the formation of a Board of Reference composed as he suggested of hygienists, chemists, and representatives of various industries, and that this Board should decide whether the article is wholesome, and is correctly labelled, and that to them should be referred questions such as the analysis of articles of food, including spirits. Would you regard such a Board as of value?—Not at present.

6672. No, I do not mean at present, but if they could arrive at standard methods?—Certainly, if they could arrive at a standard method, or if you get at a standard—something which we could depend upon.

6673. Then you say its existence would be justified?—Yes, but you must understand that I am not a chemist at all. We have to work a distillery very much by rule of thumb, and we would be delighted if we could get some means of finding out what is wrong not only in whiskey but in beer, or anything else. As I said, if you can get a standard I have no doubt that every one of us would be delighted.

6674. (*Dr. Cushny.*) I think you stated that you thought that more of the blend could be drunk without intoxication?—Yes, more of the blend of malt and grain could be drunk without intoxication. It would be less if you have pure malt.

6675. Would a man get more intoxicated if he had more pure malt than if he had drunk the blend?—I think so.

6676. What evidence have you of that?—I have no evidence.

6677. That is simply an impression?—Yes, that is simply an impression. I have never tried it.

6678. I put it to you because it seems to me extremely improbable, but then you state that a blend is perhaps better than malt whiskey?—A blend is more suitable for a climate like England, and for those living under the sedentary habits that we do.

6679. Is this merely an impression?—I know it myself because I know perfectly well I can take more of a blend here with a certain proportion of grain than if I drank pure malt whiskey.

6680. You have tried the experiment?—Yes, I have tried the experiment, and I much prefer it; it is better for us.

6681. I mean in regard to old whiskey. Do you think it is better for you than new?—Yes, most decidedly.

6682. How do you know the difference?—It is much pleasanter.

6683. Is it less harmful?—Yes, certainly, and you feel very much better in the morning. I say that distinctly, anybody can try it themselves and experiment.

6684. We have had difficulty in getting evidence of it?—My idea is that the older you get your spirit the better for you, there is no doubt about it, and the lighter you can get that old whiskey the better.

6685. (*Dr. Adeney.*) That is the general experience of mankind?—Yes.

6686. (*Chairman.*) And in other matters besides whiskey?—Certainly.

6687. (*Dr. Cushny.*) What evidence have you that English spirit is sold as Scotch and Irish whiskey?—What is it sold as? It is made, and it is certainly not sold as gin. I was asked that same question before. I have no proof of it, but I know it is done. You cannot get proof of it.

6688. You suggest that this should be prevented?—Yes, any spirit made from molasses or other subjects should not be sold as Scotch or Irish whiskey.

6689. How are you going to prevent it?—The Excise can prevent it by following it up. If a publican in London gets three or four hogsheads a week of English spirit made from molasses you can find out what he does with it.

6690. But by that are you not going to add enormously to the labours of the Excise?—Certainly, but you cannot have any restriction on anything without adding to the labours of the Excise and increasing the Excise.

6691. I am afraid that is not practicable?—It is practicable, but it is a question of money.

6692. Is that for the benefit of the consumer?—Yes, it is for the benfit of the consumer, to prevent the selling of a molasses spirit, which does not mature, for Scotch or Irish whiskey.

6693. Does that do the consumer any harm?—I do not think it does him any good.

6694. That is not my question?—I have not tried it.

6695. (*Chairman.*) You spoke of the change of public opinion as regards strong whiskey. In former days I suppose whiskey was drunk either by itself, that is to say, drunk neat or drunk a good deal as toddy, but latterly the change has come of drinking it with aerated waters?—That is so.

6696. Has that change had any effect on the demand for the different classes of whiskey?—Yes.

6697. In what way?—In this way, that as to the whiskey that one would have for toddy the blend would not be the same blend as you would have with cold water or with aerated waters. The whiskey that would be used principally for toddy would have the predominating flavour of Islay, where you would have a strong peaty flavour, and you would get the aroma with hot water, but taken cold, or with aerated waters, you want more of a Glen Livet flavour—the predominating figure would be Glen Livet.

6698. Now you are giving examples. In what way would those two whiskies differ? Why does the blend of the Glen Livet differ?—It has more juniper than peat.

6699. The drinking of aerated water with brandy and whiskey is a custom of comparatively late years?—Yes, that is caused by the blends. It is a much pleasanter thing to drink a blend with mineral water than a toddy. If people came back to toddy they would have different whiskey.

6700. You say the blend is the cause and not the effect?—Yes, people have taken more to drinking whiskey with mineral waters than toddy. Toddy was a much heavier whiskey than the whiskey you drink with mineral waters. The blends have come now to be much more suitable for mineral waters than the distinct whiskies would have been.

6701. With toddy you would get the sweetness of the sugar with the warm water?—Yes, you would get a more oily flavour and a much higher flavour.

6702. We have got here two of your labels. You do on those labels differentiate the Scotch pure grain whiskey and the pure malt pot still whiskey. Why do you differentiate between them and not put "pure Scotch whiskey" for both of them?—There is another label which is a blend of the two, but the great consumption is of the blend.

6703. Never mind about the blend. You have Scotch pure grain whiskey, and according to you the pure blend and the pure malt are simply Scotch whiskey?—Yes.

6704. Why not content yourself by calling both those whiskies Scotch whiskey and leave the pure grain and the pure malt out?—Because if the public want grain there it is, and if they want malt there it is, and if they want a blend they have it.

6705. As between yourself, the distiller, and the merchant, you do give the information—the distinction between pure grain and pure malt?—Yes. The buyer knows exactly what he is getting.

6706. You do give to your merchant the information whether it is pure grain or pure malt?—Yes, if he wishes it.

6707. Then why cannot that be carried beyond the merchant?—You mean to the retailer?—

6708. Yes?—There is no reason why it should not be carried to him. The public get that label at present.

6709. Among what people does this label go?—It goes direct to the public.

6710. But they do not stick the label on their hats?—No, but it is put on a bottle of whiskey and sold in public-houses.

6711. Does this label go on the bottle?—Yes.

6712. Is it issued for that purpose?—Yes, that label is put on the bottle.

6713. Does this label go on the casks?—No, on the bottles.

6714. Do you supply it to the publican in considerable numbers?—Yes.

6715. So that each bottle shall have it on?—No, we put it on the bottle.

6716. Why do you put it on the bottle?—Because we bottle the whiskey.

6717. I know that, but for what purpose do you put it on the bottle?—Because some publicans' customers want a grain whiskey, and another publican's customers want pure malt, and another publican wants a blend.

6718. The publican would know that from your invoice? You give this only to the publican for his own information?—No, it is for the public.

6719. It does not stop at the publican?—The publican buys that bottle with that label on.

6720. The bottle stands in his bar with this label on?—Yes, or the man takes the bottle home with him.

6721. Then you are giving information to the public of the difference between these two?—But you do not give the proportions. I do not object to the public knowing that they are buying all grain.

6722. Do you object to it being obligatory to put on the bottle whether it is pure malt or grain?—I do not mind it being obligatory.

6723. You do not mind it being obligatory upon you to put it?—No.

6724. What do you object to?—I object to the proportions.

6725. I have not said a word to you about proportions. I am on those two things. Is there any objection to its being made obligatory upon you to put these two labels on the bottle to show whether it is pure malt or pure grain?—No.

6726. Now I understand your objection to the blending in proportion. (*Dr. G. S. Buchanan.*) Would you be disposed to go one step further? Would it be a very difficult matter or troublesome matter to have a dividing line with regard to a blend? Supposing you had a dividing line, say, of 50 per cent.?—I would object.

6727. Say malt whiskey blended over 50 per cent. and grain whiskey blended under 50 per cent.?—I would object, I would not like it.

6728. Would there be any particular harm in it?—I think there might be if you sold pure grain or pure malt, or a blend of malt and grain without entering into any details.

6729. From the evidence you have given there is a considerably better quality given when you have over 50 per cent. of malt than when you have under 50 per cent. of malt?—I do not think there should be any percentages given, but you should sell the one or the other or a blend of them both.

6730. (*Dr. Adeney.*) How do you distinguish between your two blends? You said you used different proportions of patent and pot?—Yes, in different priced whiskies.

6731. How is that distinguished in your label? Have you any distinguishing mark?—No; that is sold in cask.

6732. So that the consumer has no means of knowing?—No.

6733. If you sell a puncheon of whiskey you cannot follow that puncheon of whiskey till the consumer drinks it?—No.

6734. (*Dr. Horace T. Brown.*) How long have you issued this label?—Since the prosecution at Islington, because we were continually being asked for a grain whiskey.

6735. Up to that time you did not show whether it was a blend, or a malt, or a grain?—No.

6736. (*Chairman.*) I do not know if you have knowledge of the ordinary English purchaser. If he saw these two labels—"pure malt" and "Scotch grain whiskey"—do you think it would make very much difference? I understand people in Scotland who live near the distilleries would know, but do you think the ordinary customer would know the difference?—No. The principal part of the trade is one that is a blend of the two. The largest trade is in a blend of

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the Scotch grain and pure malt. When this prosecution took place there were continual inquiries for grain whiskey and pure malt whiskey, and we had to do something to meet what the public wanted. They can get either the one or the other, or if they prefer it they can have a blend of the two.

6737. Have you heard of any of the publicans' customers or of any of your customers objecting to using these labels?—No.

6738. As you say, if they sell it by the bottle a man can take the whole bottle home with him?—Yes.

6739. (*Dr. Adeney.*) Have you any label with you that you put upon your bottles of blended whiskey?—Yes. (*The label was handed to the Commissioner.*)

6740. This label does not protect you from retailers selling your poorer quality of blends for the better quality?—Do you mean in bulk—in cask?

6741. No, across the counter?—If he gets it out of the bottle.

6742. You sell different qualities?—Yes. If you sell the retailer a puncheon or hogshead of whiskey you cannot follow that hogshead or puncheon at all, and it may go anywhere, and you do not know how he is selling it. It is sold as his whiskey and not as ours.

The witness withdrew.

Mr. W. J. Seaman.

Mr. W. J. SEAMAN, called.

6743. (*Dr. Horace T. Brown.*) You have had considerable experience in the trade having joined Messrs. W. P. Lowrie and Co. in 1880?—That is so.

6744. You were also partner prior to the formation of the present limited Company, and since then have been one of the managing directors?—That is so.

6745. You are also a director of Messrs. James Buchanan and Co., Limited?—Yes.

6746. Messrs. W. P. Lowrie and Co., I believe, are malt distillers, general Excise bonded warehouse-proprietors and blenders and bottlers to the wholesale trade?—Yes.

6747. Besides their own Convalmore Glen-Livet Distillery they are closely associated with, I think, five other malt distilleries?—That is so.

6748. Then in your *précis* you tell us the amount you have blended during the six months from the 1st October to the end of March of this year in your warehouses?—Yes, we blended in our warehouses during that period 2,604,000 proof gallons. These are the Inland Revenue figures.

6749. How much pure malt was there?—Fully 60 per cent. of pure malt with an average age of quite seven years.

6750. What would be your definition of Scotch whiskey?—In the first place I venture to think Scotch whiskey should be made in Scotland and in Scotland only, and likewise correspondingly that Irish whiskey should be made in Ireland only.

6751. I may have some questions to ask you on your *précis*, but I think it better to take you right through it first. In reply to the question as to whether you consider the product of the patent still entitled to be described as whiskey or not you consider, do you not, that this depends on the material used and not on the construction of the still in which it is made?—That is my opinion.

6752. Then what would be your definition of Scotch whiskey as regards the mode of manufacture?—That it should be distilled in Scotland from a mash consisting of certain cereals—I do not think any cereals because I certainly do not think that rice should be employed. I have enumerated in my *précis* barley, oats, maize, rye, and in the case of Irish whiskey wheat. I put these in as these are the cereals that are habitually used at present in the manufacture of Scotch grain whiskey, and that the mash should contain not less than 30 per cent. of malt as is the practice in the manufacture of Scotch grain whiskey in Scotland at the present time.

6753. You are of opinion that such a spirit is not a neutral spirit, but is whiskey?—I certainly do not think that it is a neutral spirit. It has the characteristics of whiskey and undoubtedly matures with age.

6754. Will you give us the reasons you have for wishing to standardise the mash tun?—My principal reason for advocating, as I have done for some time, what virtually amounts to standardising the mash tun is that I consider it most desirable that the Revenue Department should recognise whiskey as a distinct product in the same way as brandy and rum are recognised as such. They are entered as brandy and as rum, and I think that Scotch whiskey should be recognised as a distinct product and not merely as plain British spirits.

6755. Would you adopt some other nomenclature for every other product of the patent still which is not manufactured from the specified materials with the specified proportion of malt?—I think these might still be known as plain British spirit.

6756. Is this advocated by the Distillers' Company?—No, I do not think they actually advocated it, but they certainly agreed to accept it. I sent you with the permission of the Chairman of the meeting and the Secretary an extract from a minute of a meeting of the West, South and East of Scotland Malt Distillers' Association, held in Glasgow on the 6th March last, at which Mr. William Ross, the Managing Director of the Distillers' Company was present. It will be observed from this minute that Sir Robert Usher's motion, as finally put, was carried almost unanimously, one gentleman alone dissenting.

6757. You consider it most important that some such course should be adopted in the interests both of the public and of all branches of the legitimate whiskey trade?—I certainly do.

6758. What have you to say about the use of molasses and other materials than cereals in Scotch grain distilleries?—I do not think they are used at present, but nevertheless they can be used.

6759. They are not used in Scotch grain distilleries?—They are not. I think that has been shown in the evidence. There is nothing, I believe, in the law, that is in the Spirits Act, as it at present stands, to prevent a distiller producing plain British spirits from any materials whatsoever, and selling it as whiskey. I think it must be admitted that such spirit is not whiskey. I do not recognise molasses spirit as whiskey; it is quite easily distinguishable from whiskey, and in my opinion the sale of it as such is to the prejudice of the purchaser, and I think it is inimical to the public health, unfair to the honest trader, and, in spirit, at least, I venture to think, it is a contravention of the Merchandise Marks Act. I think this is one of the points that I should venture to put strongly before your lordship and the Commissioners, that Scotch whiskey should be differentiated from commercial alcohol. At the present moment commercial alcohol if manufactured by a British distiller from anything that produces spirit may be sold as whiskey.

6760. You have no knowledge that that is done in Scotland?—I have not. I do not believe it is done there, but I think it is strongly felt that it should be made illegal.

6761. There are other objections with regard to the exportation of spirits? Perhaps you would explain those?—That is, I think, a very important point. The fact that it is not contrary to Revenue regulations is, I think, largely to blame for the agitation not only in this country, but in the United States, and in Australia, on the subject of whiskey and what it is. In this connection I should also like to refer to paragraph 69 in the Spirits Act of 1880, which is also incorporated in the Inland Revenue Warehousing Code, Section 337, to this effect: "British spirits for exportation or ships' stores may have any sweetening or colouring matter, or any other ingredient added to them in warehouse, by a distiller or rectifier. The spirits must, except as provided for in paragraph 336, be removed into a separate room or compartment, having no communication with the other part of the warehouse, except by a door under Crown lock." From this it will be seen that it is permissible to take plain British spirits, or Scotch whiskey, in a bonded ware-

house, into a special export compartment, and add anything whatever to it, without any record being taken; so that in this way a cask of fine Glen Livet or fine Islay whiskey, or any other plain British spirit, might be brought from the distillery to a Revenue warehouse, removed into the special compartment, and any substances that the shipper thought fit added to it without altering the denomination on the end of the cask, which I think is a serious matter. Dr. Wiley contended that the shipper was thus enabled to do for export what was not permitted for home trade.

6762. Does that give rise to any difficulties at the present moment?—I think it does. This particular section was first brought under my notice by Dr. Wiley, of the United States Bureau of Agriculture, when he visited our Excise warehouses. In saying our practice, I mean W. P. Lowrie and Company, Limited, of which I am managing director. On bringing this before the Distillers' Association, and enquiring throughout the trade, I found that hardly anyone, as far as I recollect, only two firms, knew that such a regulation existed, and it is not taken advantage of in Scotland, or to the best of my knowledge it is not. The Central Distillers' Association approached both the Excise and Customs authorities at that time, and after considerable correspondence the replies may be summed up in the following extract taken from a letter from the Secretary to the Inland Revenue, of August 7th, 1906, to the secretary for the Distillers' Association. He said: "With reference to your suggestion that paragraph 337 of the Warehousing Code should be amended, I am to point out that the Commissioners are advised that the law, as it now stands, does not warrant an amendment as suggested." It was incorporated in the Spirits Act, and was the law of the land, and they could not modify it by regulation or by a Board Order, I presume.

6763. What is your experience of the public taste with regard to whiskey, and what direction is it taking now?—I certainly think it is taking the direction of a sound blended article. That is my experience, and the experience of my company.

6764. Do you believe the increased consumption of Scotch whiskey is in some measure accounted for by this?—I think it is. I think by making up a sound blend, an article has been produced and put before the public which pleases them as neither a pure malt nor a pure grain ever did.

6765. You state that Scotch whiskey should be made in Scotland and Irish whiskey in Ireland?—Yes.

6766. By that, I suppose you mean that the qualifying term should be based exclusively on the country of origin, and not on the special characteristics of the whiskey?—Yes. In that connection I think it is purely a geographical question. I think when a man goes in and orders a glass of Scotch whiskey he expects it to be whiskey made in Scotland.

6767. So that if a distiller chose to produce in Scotland a malt and grain whiskey by Irish pot still methods, and identical in all respects with what is ordinarily known as Irish whiskey, he should not be entitled to sell it as such?—If he produces it in Scotland it would be Scotch whiskey.

6768. I have heard a distiller, within the last few weeks, argue that the terms "Scotch" and "Irish" should apply rather to the particular kind of whiskey than to the country of origin; for instance, just as the term "Pilsener beer" is applied to many beers which are not now made in Pilsen. That is not a way of looking at it with which you would agree?—That is certainly not the way it is looked upon by anyone that I know engaged in the trade, and I do not believe that is the way in which it is looked upon by the general public.

6769. You regard it as purely geographical?—Yes.

6770. I know you would allow the use of any kind of still in the preparation of whiskey, but you would restrict the use of materials to certain specified cereals, namely, barley, oats, maize, rye and wheat?—I am not particularly arbitrary as to others being added to it except with regard to such materials as rice.

6771. Is there any reason why you should exclude such cereals as rice or buckwheat, if they are found to give good results?—My one reason for excluding rice is that I have seen a number of samples of rice spirit, known as arrack in the East, and in point of fact I saw one not long ago taken from a still in Alexandria, where it is produced to be sold as spirit. It came under my notice because it was used to mix with other products such as Scotch whiskey, but it was a most unpleasant spirit, harsh and hot, and I certainly did not recognise in it any of the characteristics of Scotch whiskey.

6772. Then, again, I see you advocate the restriction of the term "Whiskey" to the product from a mash made of not less than 30 per cent. of malt?—Yes.

6773. Is not the present practice of using 25 to 30 per cent. of malt in Scotch grain distilleries based on the fact that it is rather difficult to get complete saccharification of the grain with a less amount of malt than this?—That is not the reason for our drawing this line. I should like to say at once that I am not an expert distiller. My special knowledge, such as it is, begins where the distiller usually leaves off, that is when the whiskey is put into the cask. This line was drawn because we felt that some standard was necessary, and there must always be a more or less arbitrary line. After a long discussion at the meeting to which I have referred, it was assented to that if it had 30 per cent. of malt in it we would support it being called Scotch whiskey *per se*. We wished to draw a line between Scotch whiskey and the product of molasses.

6774. You did not consider whether the present practice of using 30 per cent. of malt was due to the fact that the whiskey was perhaps improved in flavour by the malt, or whether it was due to the finding out that that amount of malt was about the smallest quantity which could be used satisfactorily in a mash to get a complete conversion?—I would not say that at all. I understand a very much smaller quantity can be used.

6775. You put it on the score of quality? You think you get a better spirit by the use of 30 per cent. of malt?—Yes.

6776. You advocate this limitation on the question of quality?—Yes. We felt in drawing an arbitrary line that we must do so so as to include every article, even the thinnest and cheapest that was at all entitled to the name, within that line.

6777. If the difference between 20 and 30 per cent. of malt is going to improve the whiskey, is it not fair to suppose that if we go to 35 per cent. or 40 per cent. we should get a still further improvement?—Yes, it is quite fair to suppose that.

6778. Then why do you necessarily put this arbitrary limit at 30 per cent., if it is the quality of spirit that you alone are considering?—Because we considered what virtually amounted to this: that Scotch grain whiskey as manufactured in Scotland at the present time has 30 per cent. of malt in the mash tun—I speak of what we are informed by the grain distillers—and it was felt if that is so that Scotch whiskey as made in Scotland to-day is entitled to be called whiskey.

6779. You take the present practice as your basis irrespective of whether or not that 30 per cent. is the best amount to use?—Quite so.

6780. If a minimum limit of malt were used you would, I suppose, look to the Excise to see that no mash contained less than that amount?—Quite so. That is one of the reasons why that was considered quite a feasible proposal, because it is so easily workable without causing the Revenue Department any further expense, which I think is a very important point. At the present moment a return of the mash is given to the Excise authorities, and it merely means that this shall be checked. They can put in as much more as they like, of course, but the officer in charge must see that there is a minimum quantity of 30 per cent. of malt.

6781. I am afraid that would not be quite such a simple matter as you imagine it to be. I think it quite probable that any limitation of this kind would put very many more vexatious restrictions on the poor distiller than he has at the present time. The Excise would not be content to check the account given to them by the distiller, but would also want to have a careful check on the materials. They would perhaps take stocks and even keep things under lock and key. Have you considered all those questions?—We considered them, and we thought that a lock could be put

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on the shoot down which the grist comes. It is not a question of whether the distiller puts in 30 per cent. or 35 per cent. of malt so long as he puts in 30.

6782. The Excise would want a check on the distiller not putting in a further amount of maize or any other thing. It seems to me you are running a risk of putting on certain vexatious restrictions which do not exist now. Have you duly considered that?—We took it for granted that the grain distiller had duly considered it when he accepted it.

6783. Then there is another little difficulty when green malt is used fresh from the malting floors?—Yes.

6784. How would you propose to check that amount?—We understood that it was to be dried malt that was to be used.

6785. It is not dried malt in all cases?—No, but when that meeting accepted 30 per cent. they accepted 30 per cent. of dried malt.

6786. That might interfere with the present practice in certain distilleries in Scotland?—It might do so.

6787. Then I think there is another possible objection arising out of your limitation of the malt, that it introduces the necessity for another definition, that is the definition of malt. We have a good many definitions to consider. You do not say whether this should be in your opinion barley malt or rye malt, or any cereal which has been germinated. That is the first difficulty. What would you propose?—That was mentioned at that meeting, and it was accepted if it was a malted cereal, rye, or the other one that was mentioned—barley.

6788. You are aware, I suppose, that very often in bad seasons it is extremely difficult to get the whole of your barley to grow, and that you might have 20 per cent. perhaps of what a maltster calls lie backs—grains which do not germinate?—Quite so.

6789. Would a product consisting of 80 per cent. of malt and 20 per cent. of raw grain be considered a malt? I am putting all these things before you as examples of the difficulties which will arise if we attempt to limit the amount of malt which a distiller uses?—I think it might be considered as malt. The same thing occurs at the Highland Malt Distilleries, and yet theirs is pure malt.

6790. But that is not limited by Act of Parliament?—No, but the word pure malt is. When you say pure malt you mean malt only, but if you are using, say, 20 per cent. of lie backs, it is still called pure malt.

6791. I think these are some of the difficulties we shall have to contend with if we establish a minimum of malt, but at the same time I think none of these difficulties would arise if the materials had to be limited to cereals only, and it would then be the duty of the Excise to see that no other materials were used than cereals; that is to say, that certain specified cereals only should be used at the distillery, which would be a comparatively simple thing?—Yes.

6792. I notice in your *précis* you have not given any opinion about the ageing of whiskey, as to whether it is desirable to have an age limit or not. Perhaps you would give the Commission some idea of your views on that point?—I have not given any opinion in my *précis* because I feel that it is such a debatable question. It seems to me that it has not been proven that new spirit is deleterious to health, but at the same time I personally would be glad to welcome an age limit because I have perhaps fallen in with the general opinion that old whiskey is better. Then I notice that every medical man in recommending Scotch whiskey recommends a little old Scotch whiskey, and he never recommends a little new whiskey.

6793. You would admit that no restriction ought to be imposed unless there is some good reason for it?—That is so.

6794. Do you think there is a good and sufficient reason for establishing an age limit?—I am afraid that is a matter more for a medical opinion than mine; but personally I should welcome it because I am imbued with the idea that it is better. I do not know what precise grounds I have for the reason.

6795. (*Dr. Bradford.*) We have the statement in your *précis* about the distillation of spirit from molasses, that it is inimical to the public health. Could you tell us on what you base that?—On an experiment. That is the only experiment that I ever ventured to make myself, and it was to a very limited extent. I got a sample of what was undoubtedly molasses spirit from a friend of mine. I tried a dessert-spoonful diluted with water, and I could tell it at once; it got to the back of the nose in a sharp way, it burned my throat, and caused me some little discomfort which lasted for a few minutes afterwards.

6796. (*Chairman.*) Was that called molasses spirit?—I procured it as an experiment, and certainly it was molasses. It was procured for me. I did not buy it in a shop.

6797. (*Dr. Bradford.*) You did not buy it?—No, but a friend of mine procured it from a distiller.

6798. So that your statement is based on that one experiment on yourself?—I tried it twice, and also one of my expert tasters in our establishment in Glasgow tried it with the same result.

6799. (*Dr. Horace T. Brown.*) Had rum the same effect on you?—I do not know that I ever experimented scientifically with rum.

6800. You experimented only with molasses spirit?—Yes, but is not molasses very much thinner and much more highly rectified than rum?

6801. (*Dr. Bradford.*) This was not molasses? This was sold as whiskey?—No, I merely procured a sample of molasses spirit to try it

6802. (*Mr. J. Y. Buchanan.*) Molasses spirit from a patent still?—Yes.

6803. Have you considered the importance of the ageing of the whiskey? You consider it very important that old whiskey should be used for blends?—I think it is very important from the point of view of public taste, but I am entirely open-minded whether it is good for the public health or not. I think so, but I do not know.

6804. I am not speaking so much in that way, but what I want to know from you is this: Has it come under your notice that any artificial means are used for producing the effect of ageing?—I have not seen any such.

6805. Do you know of any that have given successful results?—I have seen one or two samples produced as a laboratory experiment which, when tried in a larger way, did not give anything like the same results.

6806. Can you give any account of what the effect of it was? I do not ask what the nature of it was, but would it make the whiskey bad, or what?—No, it did not. I am afraid I cannot give the details of what it was, but while it produced a certain appearance of age, it also changed the character of the whiskey which was undesirable from the blender's point of view.

6807. Are any of them in use?—Not to my knowledge.

6808. (*Dr. Adeney.*) I have been asked to put some questions to you on behalf of Mr. Guillemard. The first question you have partially answered already. You suggest that the materials for Scotch whiskey should include a certain minimum quantity of malt. How would you ensure that the prescribed quantity was used?—By the officer in charge checking the weights. They are already returned to the Revenue, and I merely want the officer in charge to check them and say that they are returned correctly.

6809. Would you require all materials at a distillery to be kept under Revenue control?—I do not think there is any occasion to keep them under Revenue control further than that the control be that a Crown lock shall be on the shoot that fills the mash tun.

6810. You desire to restrict the use of cereals to certain grains?—I am not at all arbitrary about that.

6811. All you wish the Revenue control over is the malt?—Yes, we wish to have some sort of guarantee that they will continue to make it as good as they are making it at present, and therefore we draw the line where they are themselves prepared to accept it.

6812. Are you aware that this, to be effective, would mean a very serious interference with the distillers' operations, and add much expense to the distiller and to the Revenue?—I do not think it need.

6813. Mr. Guillemard appears to suggest that it would?—Mr. Guillemard, of course, is an expert in that matter.

6814. With regard to the use of cereals only, are you aware that molasses, as is known from the Revenue Records, has from time to time, and during many years, been largely used at patent still distilleries, and even in some pot still distilleries in Scotland, and that the spirits therefrom have presumably been treated as whiskey?—I believe that, for a number of years, molasses has not been used to any extent in Scotland, and I understand that it is not used at all just now, but that is a matter entirely within the knowledge of the Revenue Department, and they can answer it positively.

6815. The Revenue records referred to here you do not know of personally?—I do not.

6816. Does it not appear to you that your definition of whiskey is scarcely defensible historically, having regard to the former question?—Things have changed very much within my recollection, especially within the last fifteen years. For instance, I do not accept the definition or the differentiation between pot and patent still. I think you should distinguish between malt and grain in Scotland. In Ireland, I understand, it should be pot and patent, because the materials are so much alike, but I think in Scotland it should be malt and grain. In our stock books no such word as pot or patent appears. As a matter of fact, I do not believe in using the word "patent"; it is the Coffey still patent which is referred to, which expired many years ago, and the only still protected by a patent is a still in use at a malt distillery in Scotland.

6817. You make in your *précis* some reference to Section 69 of the Spirits Act, 1880. Are you aware that the privilege therein given was expressly extended to distillers, presumably at their request, in the year 1860, to enable them to prepare their spirits for foreign markets?—I was not aware of that in fact. We tried very much to find out what possible reason could have been given for such an indulgence,

6818. You suggest that anything might be added under the Revenue regulations to a cask of fine Glen Livet or fine Islay whiskey by a shipper. Is it not a fact that the shipper in such a case must be the distiller?—Not necessarily at all; in any Excise bonded warehouse, or Customs, you can have such a compartment. I am informed of that by a Collector of Glasgow, and by a Supervisor of our warehouses, and such a statement was not brought out in the correspondence with the Revenue Department.

6819. Do you think that the public generally know the difference between a blended Scotch and a blended Irish whiskey?—Certainly, I should think they do if they are in the habit of drinking whiskey.

6820. If you would allow the product of a patent still to be called whiskey—assuming it to be made from cereals—what objection could be raised to English spirit so made being called whiskey?—None; but I would object to it being called Scotch purely on geographical grounds.

6821. How would you prevent the sale to the consumer of a blend of English or Irish spirit with Scotch spirit as Scotch whiskey?—I am afraid it could hardly be prevented, and it could only be punished when found out. There is nothing at the present moment to prevent a man from selling it. Rum is very dear, and there is nothing at the present moment to prevent a man adding gin to his rum, but he would be punished if discovered. He takes the risk in breaking the law.

6822. Do you think it is practicable to state on the labels the constituents of a blend so far as the proportion of pot to patent still is concerned?—As far as the constituent parts are concerned I do not.

6823. Now, I should like to ask you one or two questions myself. Did I gather aright from you that the only distinction in your mind between Scotch and Irish whiskey is the geographical distinction?—No, certainly not. I think there is a very vast difference between Irish pot still whiskey and Scotch malt whiskey, and there is also a smaller difference between Irish grain whiskey and Scotch grain whiskey.

6824. Then you would not support Mr. Greenlees in saying that Irish pot still whiskey should be differently named so as to bring under notice the fact that it is prepared from a mixture of malt and unmalted whiskies?—No, certainly not. I think if it is described as pot still it describes it sufficiently.

6825. Do you think it is necessary to distinguish between patent still spirits, whether from Scotland, England or Ireland?—I think if a standard were accepted, whatever that might be, as to what whiskey was, and grain spirit were included within that standard, that would be sufficient.

6826. Do you mean a chemical standard?—No; might I venture to say a legal standard, a defined and definite standard such as the one suggested by myself?

6827. I notice you include maize among your allowable cereals, and not rice. Could you tell me why you include maize?—I include maize because in a practice of many years it has been found to produce a satisfactory article.

6828. A satisfactory patent still whiskey?—Yes, a satisfactory grain whiskey.

6829. And the flavour which the maize would give if employed in the pot still process would not appear definite in a patent still process?—I am not aware what the precise flavour of maize would be in a pot still.

6830. We have had it stated before that maize makes an unpleasant spirit when employed as a material in a pot still?—I do not agree with that.

6831. Do you say that from your own experience?—I say that Scotch grain whiskey as manufactured today is quite a sound article. It is a cheap article.

6832. If we based a definition on the materials, perhaps it would be simpler the fewer the materials we have to see to?—Quite so.

6833. With regard to this rice spirit that you have referred to, was that produced in a pot still, or a patent still?—I have no knowledge, but I should certainly think it was produced in a patent still because it was of a high strength when I saw it. It was evidently fairly highly rectified.

6834. I gather from you that you would like to base the definition of whiskey upon the materials employed, that is to say, you regard it as the fruit of fermented wash of cereals in a similar way that brandy is regarded as the produce of the grape?—Yes, I should like the cereals detailed. I do not know that I in any way insist on those that I have mentioned, but I certainly think it should be understood what the cereals should be. If it is decided to include a large number, well and good.

6835. Have you any experience of blending Irish pot still whiskies?—No, none whatever. Our business for practical purposes is entirely in Scotch whiskey. I have no knowledge whatever of Irish whiskey.

6836. (*Dr. Horace T. Brown.*) I should like to ask you one question with regard to Mr. Guillemard's questions, which, I think, gave rise to a little misunderstanding. You say the shipper could in all cases add what he likes by giving the proper notice?—By the shipper I referred to, and perhaps I should have said, the bonded warehouse proprietor.

6837. But according to Section 69 of the Spirits Act, 1880, it is only a distiller or rectifier who may, in accordance with the prescribed regulations add sweetening, or colouring matter, or any other substance?—I asked two high authorities in the Revenue Department, and they told me that that would apply to a general bonded warehouse as well. They said we could have one if we wanted it, but we do not want it. There is nothing to prevent our having it.

6838. (*Dr. G. S. Buchanan.*) Messrs. W. P. Lowrie and Co., whom you represent, are concerned very largely, are they not, in blending different Scotch whiskies in bonded warehouses?—Quite so.

6839. Partly for their own firm and very largely for other firms?—Quite so.

6840. Can you tell me from the general experience of your firm whether you would regard the best blends and the higher priced blends as containing generally a larger proportion of malt?—Quite so, provided they are old enough.

6841. I do not want to ask you questions you would not like to answer about your special blends—the special high-class blends which I understand are made to a very large extent?—I am perfectly willing to give you any information I can.

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6842. Could you say generally with regard to them whether one would be correct in putting the proportion of malt whiskey at, we will say, over 50 per cent?—In a great many cases, provided the whiskey is really old there is quite a large quantity of whiskey which would be. In fact, the average of whiskey blended in our warehouses contains over 60 per cent. of malt.

6843. You bottle, do you not, at your warehouses?—We do.

6844. The descriptions that are put on the labels are put on for your customers. You label for your customers?—We do. We have no labels of our own.

6845. The description that is given on the label is a matter I suppose outside your own control?—Quite.

6846. Have you ever had any occasion to protest against what you regard as mislabelling?—We have in extreme cases.

6847. Can you say whether the word "Highland" is regarded as an important asset in labelling whiskey?—I have no doubt it is.

6848. I notice you are also concerned with Messrs. James Buchanan & Co.?—Yes.

6849. We had, I think, one witness who told us that the word "Highland" was removed, I think it was, from their Black and White label?—From the capsule.

6850. His statement is correct, is it not?—Yes, in 1903 that was done.

6851. That did not connote any change in the whiskey?—It did not.

6852. Then with regard to your practice in sending out blends to the retailers, does the retailer, as a rule, know what is supplied to him as regards the proportion of grain whiskey or malt?—As a matter of fact, in our position in the trade we do not deal with the retailer at all, and we do not come in contact with him. We are precluded from doing so because we supply the leading wholesale houses, and bottle for them.

6853. The wholesale houses know what they are receiving?—Yes, undoubtedly.

6854. It is mentioned in the invoices?—Yes; they frequently write and ask us, and we invariably tell them.

6855. Now, I want to ask you one question about your definition. You think that Scotch whiskey should be made in Scotland only. Do you mean distilled in Scotland only, or blended in Scotland only?—I mean distilled in Scotland only. It may be blended anywhere, provided it is distilled there.

6856. You were asked a question about the control to be exercised by the Inland Revenue over a limit of 30 per cent. of malt in the patent still product. The control that would be required would not be a control for the purpose of protecting the Revenue in any sense, would it?—No, it would not.

6857. It would be merely for the purpose of checking the description that was given of the spirit—to see that it was a correct description?—Quite so.

6858. Therefore the kind of control need not necessarily be a detailed control involving a lock and key, need it?—As far as I can recognise it the only reason for a lock and key would be to see that not more than 70 per cent. of the other materials were used.

6859. But you can get very substantial control by simpler methods than that. You have said there is a substantial control over the addition of gin to rum?—I do not know it is done, but it was suggested to me the other day. It is a breach of the law.

6860. If you have a substantial penalty then it would be enough if you have an occasional check?—There are a great many things a distiller might do to-day if it were not illegal, but he does not do them.

6861. With regard to the question of age, I take it your position is this, that you consider that age is an important factor in the manufacture of a satisfactory whiskey?—Yes, in the production of it.

6862. You say that it is an essential factor up to a certain point?—Yes, it is a very desirable factor.

6863. Whether it is in the interest of public health or not, the consumer would get a better quality whiskey if he got a whiskey that was not new?—I should say so, certainly.

6864. You say you think it would be most desirable that the Revenue Departments should recognise whiskey as a distinct product in the same way as brandy and rum are recognised. You recognise, I suppose, that the recognition by the Revenue Department of brandy is as a grape-distilled article, whereas brandy mixed with grain spirit should be called British brandy or be otherwise distinguished?—Quite so, but if grain whiskey when made from certain cereals with the prescribed proportion of malt is recognised as whiskey then you are merely blending one whiskey with another, and therefore the whole is whiskey.

6865. The recognition you desire by the Revenue Department is in the interests of the Scotch whiskey trade, is it not? You say you desire that the Revenue Department should recognise whiskey as a distinct product, and not merely call it plain spirit?—Yes, partly in the interests of the trader, and I should say also from the point of view of the public.

6866. That involves, does it not, that there should be, in addition to recognising this, some control by the Excise or by some other authority over misdescription?—Yes, I should certainly think so.

6867. You would recognise that that is part of what you are aiming at, and you would advocate that?—That is so.

6868. I understand one important reason that you wish for this recognition is in connection with your foreign trade?—That has largely to do with it.

6869. Your firm in particular is concerned with the export of a large quantity of whiskey?—Yes, and a number of other firms.

6870. The mere guarantee by the Revenue authorities or the supervision by them of a description of Scotch whiskey as simply an article distilled in Scotland is not likely to carry much conviction, or be of much assistance in connection with foreign or Colonial food laws, is it?—Perhaps not, but it gets us a certain distance. It gets us out of certain serious misrepresentations and allegations that have been made in Western Australia and elsewhere.

6871. It is the geographical term that I am speaking of. The mere geographical guarantee that it is an article made in Scotland is not likely to help in foreign countries by itself?—No, not by itself.

6872. You would want in addition some form of official definition, such, for instance, as you have suggested to us here?—There are other definitions. I would be very pleased to see a certain amount of malt used in the blend, but there are such practical difficulties in the way that we used this as an irreducible minimum.

6873. (*Dr. Horace T. Brown.*) As a thing that you can check?—Yes, that is so.

6874. (*Dr. G. S. Buchanan.*) There is an increasing tendency of foreign countries to establish special requirements in connection with specified articles of food and drink?—I think that is so, undoubtedly.

6875. Codes of food descriptions are growing up in foreign countries, and there is an increasing demand by them, rightly or wrongly, for attestation and certification, and so forth?—Yes.

6876. That has particularly come to a head in the United States in connection with their Pure Food definitions?—That is so.

6877. Your advocacy of this recognition by the Revenue Department, or by some other official department, of particular descriptions of Scotch whiskey is to a large extent due to the fact that that will assist in connection with negotiations for, or in connection with the trade with these countries which have food law restrictions?—That also has influenced my opinion considerably.

6878. You realise that that might be carried a little further, and that they may not merely require an official description of Scotch whiskey as such, but they might require some sub-descriptions, if I may so call it, for example, as to what constitutes Highland whiskey or grain whiskey?—Quite so, and then, in that case, we should have to conform with the laws or requirements of each respective country.

6879. (*Dr. Adeney.*) When you suggest that the Revenue Department should recognise whiskey as a distinct product in the same way as brandy is recognised, do you carry your suggestion so far as that the

Excise should exercise any control over spirits in bonded warehouses so as to prevent any mis-description?—Certainly. I mean this, if, at the time of manufacture, instead of entering in the books of the Revenue Department "Plain British spirits" they entered the word "Whiskey," that article would only be allowed to be blended with whiskey—in bond, of course. What is done outside bond, of course, is difficult to check, but in bond it would be inadmissible to blend that with any other kind of spirit, as with brandy—it would then become mixed spirits, and would lose its name.

6880. If it were possible for the Excise authorities to institute such a supervision would it give the whiskey trade distinct protection do you think?—I do not think it would particularly, but I think it would give the public a distinct protection. At present there is nothing to prevent any plain British spirit being sold as whiskey, and any spirit distilled in England, Scotland, or the British Islands is plain British spirit, and things that are equal to the same thing are equal to one another.

6881. Would there be anything in the suggested possibility that a whiskey being properly described on leaving the Excise control, might be blended with silent spirit or foreign spirits?—After going to the duty-paid warehouse?

6882. Yes?—That is one of the difficulties.

6883. Is it a practical difficulty?—I do not think so. I do not think it is done at present. I do not think foreign spirits are used to any extent at present.

6884. If the Excise authorities could introduce such a supervision do you think it would be of distinct value?—I do.

6885. And a protection to the consumer?—Yes.

6886. (*Chairman.*) If the whiskey was in fact a compound manufacture, with, say, 28 per cent. of malt, what is to become of it, according to your view?—If it were manufactured with 30 per cent. of malt ——

6887. I say with 28 per cent. of malt—what is to become of that product?—That would be plain British spirit, and can be used as commercial alcohol.

6888. Then you do not prevent its being used?—Certainly not.

6889. Is it in any way detrimental to health?—I am not prepared to answer that question as regards health.

6890. You do not say that it is detrimental to health?—No.

6891. But you would sell it with some distinctive mark upon it?—Yes.

6892. What should that be? I do not want to go into too great particularity about it?—If that line were drawn there would be no plain British spirit manufactured with 28 per cent. of malt.

6893. Would you call it whiskey?—No.

6894. What would you call it?—Plain British spirit.

6895. In whose interest would that be? Is it in the interests of the trade that you make that distinction?—I think not at all.

6896. Are you speaking now on behalf of the public?—I think it would be distinctly in the interests of the public.

6897. If it is not deleterious to health why should the public know whether it is 28 or 30 per cent. of malt?—There is no reason at all. I wish to prevent them from getting molasses spirit.

6898. We are not on molasses spirit now. You put it if it is 28 per cent. of malt and all the rest is grain—cereal. That has nothing to do with molasses?—I am afraid I have not made myself sufficiently clear.

6899. I am sure that I have not made myself clear to you?—Molasses spirit is recognised, and, in fact, alcohol distilled from any materials whatsoever—it may be anything at all either with or without malt. If it is produced by a British distiller that can be warehoused as plain British spirit, and plain British can be sold as whiskey. Now I think that it certainly is not in the interests of the public that they should drink that molasses spirit—it is a misdescription.

6900. If it is molasses spirit and nothing else, no malt and no grain, why do you say it can be sold as whiskey?—Because it can be warehoused as plain British spirits, and everything that is warehoused as plain British spirits may be sold as whiskey according to the Spirits Act.

6901. Can it be sold as brandy equally as whiskey?—No, because brandy is brandy; it is specially designated.

6902. Is whiskey designated?—No.

6903. With regard to this compound that you speak of—the molasses compound, in practice what is mixed with the molasses?—I am not a practical distiller, and I do not know exactly the process, but I know that a commercial spirit is produced for the arts and manufactures which is produced largely from molasses. We do not use it, and it is not used as whiskey, but still there is, I believe, a legal ability under the Spirits Act to do so, and we want to stop that.

6904. Is it in large quantities? Of course we have heard of a considerable quantity of molasses being used in England?—Yes.

6905. This does not occur in Scotland?—At present it is not being used in Scotland, I believe. I think that came out in Mr. Tedder's evidence.

6906. That amount of molasses represented a large manufacture?—Yes.

6907. Would it be deleterious to health? I thought it had been mixed with grain, but you concentrated it upon the molasses. What sort of stuff is this?—I merely instanced this spirit made from molasses.

6908. Is it the product from molasses that you are dealing with?—Yes.

6909. Where is the evil?—I think the evil is that it can be sold as whiskey, although I do not think that it is sold as whiskey.

6910. Is there a large quantity of it?—There is a large quantity of it manufactured. I do not think it is sold as whiskey, but still the ability to do so is the cause for a great many extraordinary statements being made.

6911. What is the other compound besides molasses?—Sago, and I think we might include rice as well.

6912. Has it any resemblance to whiskey when tasted?—It has a remote resemblance, but I do not think the molasses spirit has any resemblance at all. I think that is very nasty.

6913. I really thought you were dealing with a kind of patent still mixture of 30 per cent. of malt and the rest grain?—That I want earmarked as whiskey.

6914. What would you earmark that as?—As grain whiskey—let it be recognised as whiskey.

6915. You are in favour of that being earmarked as whiskey?—Yes, I am in favour of that being earmarked as whiskey provided there is 30 per cent. of malt in it.

6916. But if there was 8 per cent. of malt in it, what would you do with that?—That would be simply commercial alcohol.

6917. How would you label it?—I should not sell it at all for consumption.

6918. We have a statement that there is a good deal of it manufactured with 10 per cent. of malt?—Yes, we have, but I do not think that is used for human consumption.

6919. (*Mr. J. Y. Buchanan.*) Your point is that whiskey should be recognised like brandy?—Quite so.

6920. And that molasses should not be admissible?—Certainly not.

6921. Whiskey defined as whiskey must contain 30 per cent. of malt?—We recommend that, because it is accepted by the distillers.

6922. (*Chairman.*) You are speaking of what is used in the mash?—Yes.

6923. We have heard that there are smaller quantities than 30 per cent. being used and sold as whiskey. You wish to alter that and say that any production that has not 30 per cent. of malt in the mash should not be sold as whiskey?—Yes, we wish to prevent that.

6924. Would you allow it to be sold at all?—Certainly it may be sold.

6925. As what?—As plain British spirit.

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6926. By that name?—Yes, by that name or simply as alcohol.

6927. That is the same thing, is it not?—Yes, practically.

6928. Are you speaking of the general view of any portion of the trade now?—In recommending this I certainly think I am, because at this meeting of which I have spoken, which was very largely attended that definition was generally adopted.

6929. Was that a meeting which selected Sir Robert Usher as chairman?—No, he was not chairman at that time, Mr. Townsend was chairman at that time.

6930. Sir Robert Usher was elected chairman?—No, he was not chairman; he was present at the meeting, but not as chairman. This was a meeting of the West, South and East of Scotland Malt Distillers' Association held in Glasgow.

6931. He was not present at the first meeting; then he was elected chairman, and it was he who dealt with it?—That was the Central Committee

6932. He represented that body as a representative of the Committee?—That was a Committee elected in order to approach the Local Government Board.

6933. Is the object of the Central Committee to stop the sale as Scotch whiskey of spirit containing under 30 per cent. of malt?—The Central Committee is practically dissolved, but it is the view of the West, South and East of Scotland Malt Distillers' Association, and also a large number of others in the trade.

6934. I want to know whether it was a representative body?—Yes. I think it is a matter that I might venture to put very strongly before you.

6935. Is there any material difference, do you think, between 30 per cent. and 25 per cent. of malt in the mash tun?—I do not think there is any material difference as regards the health of the consumer, but it is necessary to draw an arbitrary line somewhere, and we accepted that line because it was agreed to by the grain distillers.

6936. For what purpose is it necessary to draw the line?—To prevent it going too far down.

6937. You admit you have not gone too far down with 25 per cent.?—30 per cent. We want to get the best quality we can.

6938. I can understand the trade taking this view, but I do not understand how the public takes it?—I think the better the whiskey produced the better it is for the public.

6939. You say there is not a difference?—There is a difference, but not a material difference.

6940. You say there is not a material difference as regards health?—I was speaking of the flavour and general quality.

6941. That is a matter of taste?—Quite so.

6942. (*Dr. Adeney.*) Do you know what proportion the Irish pot still distillers use?—No, I do not.

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

FOURTEENTH DAY.

Tuesday, 5th May, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

W. E. ADENEY, Esq., D.Sc., F.I.C.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. JOHN MCDONALD, called.

Mr. J. McDonald.

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6943. (*Dr. Cushny.*) I believe you are the senior partner in the Ben Nevis Distilleries, Fort William?—Yes.

6944. How long have you been in the whiskey business?—About 23 years.

6945. You have been chairman of the Central Malt Distilleries Association?—Yes.

6946. What does that comprise?—The east, south and west I represent—not the central.

6947. But what does the Central Malt Distillers Association comprise?—The Central Association comprises all the malt distillers in Scotland, but I am speaking for the East, South and West Association, which is one of the branches of the Central.

6948. What is your opinion with regard to the effect of the malt in Scotch whiskey?—I am entirely interested in malt distilleries. I have no connection outside malt distilleries.

6949. You believe that malt really provides the flavours for all Scotch whiskies?—I believe the flavours come from Highland malt, and the flavour of the Scotch whiskey is derived from the Highland malt.

6950. Do you think that the malt whiskey is adapted for ordinary consumption?—The malt whiskey is adapted for ordinary consumption in its own locality in the Highlands, but further south it is generally considered to be too full in flavour, certainly when it is in the younger ages, and therefore it has been acknowledged that it ought to be toned down to a certain extent with grain whiskey.

6951. Have you noticed the evidence of Mr. Pheysey and Mr. Gilbey on this point?—I have noticed that in the south and abroad the demand is for lighter whiskies than our Highland malt, and I have always found that our own whiskey did not sell so well in the south as it would do in the north.

6952. Have you noticed that Mr. Pheysey, of the Army and Navy Stores, sells almost exclusively malt whiskey?—A pure malt whiskey, unless it is of great age, and even then it seems to be too full of flavour for people in the south and for general consumption outside our own country ——

6953. That does not seem to be the opinion in the south. Mr. Gilbey and Mr. Pheysey have both said that they used almost exclusively malt whiskies?—I sell nothing but malt. I am a malt distiller. I do not sell to the public direct, but I sell to the blenders, who again blend the whiskey, and my whiskey is sold through the wholesale trade, in certain instances to private customers, but that trade is a comparatively small one.

6954. Is that experience drawn from England only, or do you export at all?—We export practically nothing at all ourselves. We have a small export business through the wholesale trade, but being pure malt we find the demand is extremely small. At one

time it was much greater, but the blended whiskey has almost completely stopped our export trade.

6955. How would you define Scotch whiskey?—My own connection is entirely with malt, but my definition would be whiskey made from cereals, and the conversion should be by malt and not by acid.

6956. Do you accept all cereals?—I do not like to speak for grain, because I am not a grain distiller, and we ourselves use nothing but barley malt; therefore, I do not think it would be fair for me to say, and my knowledge does not enable me to do so, what other cereals might be used.

6957. You have offered a definition and we have heard it before. Some witnesses have objected to rice, for example, as a cereal. What is your opinion with regard to that?—I have never seen spirit made from rice. I have seen spirit made from molasses, and certainly the spirit made from molasses I would decidedly object to.

6958. You think that all Scotch whiskey should contain some malt?—Certainly.

6959. You would exclude pure grain?—I do not exclude pure grain from being called Scotch whiskey, because it has always been called Scotch whiskey, but I think Scotch whiskey to be typical should all of it contain a certain amount of malt.

6960. (*Dr. Horace T. Brown.*) In the mash you mean?—No, I mean a certain amount of Highland malt whiskey itself. I am a Highland malt distiller, and I hold that all Scotch whiskey should contain a certain proportion of malt whiskey.

6961. (*Dr. Cushny.*) You would not exclude grain?—No, I think grain has a right to be called Scotch whiskey, but my own personal opinion is that in all blends there should be a certain proportion of malt whiskey.

6962. How much malt whiskey?—That is a very difficult question, and could be much better answered by a distributor who knows what the palate of the public is, and who is in direct touch with them.

6963. Do you mean 50 per cent., or do you mean 5 per cent.?—Nearer 50 per cent. than 5 per cent., and as a Highland distiller I should like the proportion to be as large as possible without interfering with the sale of whiskey.

6964. Is that for the sake of the customer, or in the interest of the distiller?—That is in the interest of the distiller.

6965. Do you object to raw whiskey being sold?—Yes, I certainly object to raw whiskey being sold. I think that whiskey should be of a certain age.

6966. What age limit should you put?—With regard to an age limit for malt whiskey, it would not affect certain distilleries nearly so much because they require a higher age than the others, in a way, but taking it all over, I should think something like two to three years. The lighter whiskies do not require to be kept so long. Our own whiskey averages five years.

6967. But you would be satisfied with two years?—I think two years is a practical age.

6968. What would be the advantage to the customer of this limit of two years, do you think?—I think the whiskey would be more palatable, and also more wholesome.

6969. You have not any definite evidence as to the wholesomeness or otherwise?—I speak from personal information and from practical knowledge in that way. I think the older whiskey is more wholesome than the new. I do not think there is anything wrong with the new whiskey, but I think the older whiskey is more wholesome.

6970. You think if it was kept for two years you would get a guarantee from the Excise as to its origin?—I think we should get a guarantee then that the whiskey has been kept for two years in a British bond, and Scotch whiskey being exported would therefore have the guarantee from the Customs here, and that would put a stop on the trade that is being done from Hamburg to South America and other places in German spirit, which is sent out under label to those countries as Scotch whiskey.

6971. Have you any evidence of that?—I only know it from men who have been in South America who bought the whiskey from Hamburg, and who tell me that is the case.

6972. Then with regard to labelling whiskey. First of all you label all spirits from cereals made in Scotland as Scotch whiskey?—Yes.

6973. With some malt in it? You would insist on it having some malt in it?—Yes, there is a certain percentage of malt in pure grain whiskey.

6974. Do you think that could be subdivided by labelling at all?—I think that labelling with the idea of putting down that the whiskey is malt and grain would be a great hardship to the Highland distillers—to the best of us. It would leave the best Highland distillers on a level with the lowest and the commonest of the Lowland malts.

6975. (*Chairman.*) Why?—Because we are all put down as pure malts. You might have a whiskey of great age thoroughly matured that would be labelled pure malt, and you might have one of the very common malts, of which there are a number in the Lowlands, two months old. That would leave our very old Highland on a level with that.

6976. Supposing you put the name of the spirit on—for instance, Glenlivet on one and no particular distillery on the other?—Unless you have an Excise certificate in both cases the public would not believe you, and I think that the other case might be put where you have a blend of, say, several of the finest distilleries in the Highlands, of great age, with ten per cent. of old grain sufficient to tone it down a little. That would come in as inferior to common malt which might be only three or four months old.

6977. (*Dr. Cushny.*) What protection have you at present from such whiskey being rivalled by some Lowland malt whiskey?—As against Lowland malt?

6978. They are both sold as Scotch whiskey at present?—Yes, but I think the greater trouble will come when you say malt and grain, because you will get the very finest blend which will be made out to be inferior to a young and common pure malt, and will be put on the same level as whiskies such as were in the late prosecution, which contained 95 per cent. of new grain and 5 per cent. of common malt. You put the very finest malt blend on a level with a blend of common malt. I would much rather have Scotch whiskey left entirely open.

6979. You would object to the pure malt being labelled because it would be inferior and suggest that the whiskey was superior to the blend?—It might be. You could sell as a pure malt a very common whiskey, which people would think was something superior to one of the very finest blends, and in that way I think it would do a decided harm to the best Highland blends.

6980. Would you have pure malt labelled specially—different from "Scotch Whiskey"?—I do not think so, because I do not think that people in the south would drink much pure grain.

6981. But the whole of Fifeshire, according to one witness, indulges in pure grain?—They do not drink it out of the bottle, they drink it as the whiskey they have been used to. No export trade is done in pure grain—none outside Fifeshire. I am quite willing to leave Fifeshire to the pure grain.

6982. Do you think the blends could be divided in any way, say, a good blend of 75 per cent. malt might be divided from a poor blend of 5 per cent. malt?—I should like to see a proportion of malt in all the blends, but I am afraid it has been declared to be almost impracticable to fix a standard.

6983. Supposing you had an arrangement that a good blend—say, one of 75 per cent. malt whiskey and 25 per cent. grain was labelled "Blended Malt," and one with a blend of 50 per cent. of malt was labelled "Blended Grain," would that be of any value?—There might be the difficulty then as to the two kinds. You might get 50 per cent. of a very poor malt and 50 per cent. of grain, which would not be so good as 75 per cent. of grain, and 25 per cent. of very fine old Highland malt, so that you might label the 50 per cent. one as being better than the one with 75 per cent. of grain, but it would probably be the other way round. The one with the 25 per cent. of very old Highland malt would be probably better than the one with 50 per cent. of common malt unless you could differentiate, which you cannot do, between the different malts and say which are the fine malts and which are the common malts. I am afraid it would be very difficult to do.

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6984. You would have to arrange for a general average and not for exceptional cases. I do not quite understand this view that you represent that the pure malt is unhealthy or undesirable to drink for the Londoner, say, because we have had evidence from several men who have told us that they sell largely in London, and I suppose they sell largely pure malt —for example, Mr. Gilbey and Mr. Pheysey?—In any case, when they use pure malts and where the people sell pure malts, you will find that the pure malts are of great age and consequently dear. You cannot sell a pure malt as a pure malt unless it has great age, and great age means greater expense, and I do not think the people will pay the price for the more ordinary whiskies.

6985. Your reply, in which you said that the pure malt has been found too full or rich for general use, practically applies only to young pure malt?—Yes, that is right.

6986. (*Dr. Horace T. Brown.*) You stated that you consider the Highland malt whiskey made in the pot still provides the flavours and character of Scotch whiskey?—Yes.

6987. Do you mean to imply by that the patent still spirit has no specific character of its own, and that it merely acts in the way of diluting the other whiskey? —Chiefly so. The grain whiskey as made in Scotland has more flavour than the German spirit, which is more highly rectified, but its chief use is in diluting the flavour of the Highland.

6988. You would not forbid the use of the term "whiskey" to the patent still product alone?—No. We have always called it grain whiskey, and I have known it as grain whiskey all my life.

6989. It is fair to assume that you would allow it to be called Scotch whiskey?—Yes.

6990. Therefore it ought to have the characteristics of Scotch whiskey by itself?—Yes, but I think Scotch whiskey as it is generally known contains, as a rule, a certain proportion of malt. I do not think that grain whiskey is a characteristic Scotch whiskey. It is Scotch whiskey, but not a characteristic one.

6991. I do not quite follow you there. It either has the characteristics of Scotch whiskey or it has not?— It is made in Scotland. I think that is its chief claim to be called Scotch whiskey.

6992. You would restrict the use of the term whiskey to mashes of cereals converted by means of malt?—In fact, as it is done at present.

6993. Would you like to see the amount of malt used in a mash restricted?—Speaking as a distiller, we are surrounded with red tape already, and if you are going to add more restrictions you are going to hamper the manufacturer, and on those grounds I object to any further restrictions.

6994. You think if the malt was restricted in amount that the distiller would be placed under very unpleasant restrictions by the Excise or anyone appointed to check the amount of malt used?—I think it will cause trouble decidedly. As a distiller I am opposed to any restrictions in the mash tun. We have plenty already.

6995. But supposing the Excise was to take an occasional check of some sort, would there be any objection to that?—I do not think there would be any objection to that, but it would not be an efficient check on anyone who wishes to do wrong, and it would probably only hamper the man who wishes to do right.

6996. (*Dr. G. S. Buchanan.*) The restriction of the amount of malt in the mash would not affect you as a Highland distiller, would it?—Not in the slightest; we use nothing but malt.

6997. You personally have nothing whatever to apprehend from any regulation on that subject?—No, that is what I say. I am speaking merely as a distiller. As a manufacturer I should be very sorry to see any restrictions placed on a fellow manufacturer.

6998. Purely on general principles?—Purely on general principles.

6999. I gather that your whiskey from the Ben Nevis distilleries is sold for blending only now?—We sell a certain quantity pure—at least, it is sold through the wholesale channels, but it is a greatly diminishing amount. We admit it is not a large sale.

7000. You lay yourself out practically for supplying blenders?—If we did not we should do no business.

7001. Was it in respect of your distillery that we had an advertisement put in by a witness saying that your whiskey had a special potency for covering grains and softening plains? We were a little perplexed, or the witness was a little perplexed about that. Could you tell us what that does mean?—It means that it is a very fine, full-flavoured whiskey.

7002. You do not attempt to prepare a whiskey which is satisfactory as a self whiskey?—I believe, as a matter of fact, in our own distillery we probably have done the largest trade of any Highland distillery in pure malt whiskey.

7003. It was sold as self whiskey?—Yes. Certainly in the past we had the biggest sale of any.

7004. In what respect would you say that your methods now have altered since you were making a self whiskey?—We are making the same whiskey still; it is the public taste that has changed.

7005. The same as regards ingredients?—The only difference there may be at all is that we do not use so much peat. The taste for a smoky flavour has gone and we do not use so much peat.

7006. (*Dr. Adeney.*) Do you run your fine whiskey at the same strength?—Yes, there is practically no difference in that at all.

7007. (*Dr. G. S. Buchanan.*) A question or two about the description of whiskies. You were objecting to making a distinction on labels between pure malt on the one hand and a blend of malt and grain on the other?—Yes.

7008. On the ground that there may be a poor quality of pure malt and a good quality of blended malt and grain?—Yes, that is correct.

7009. Have you seen any recent wine merchants' catalogues? Take a place like the Civil Service Stores where they are selling at the present time the two whiskies under separate headings, the pure malt and blends of malt and grain?—The Army and Navy Stores have it, I think.

7010. I do not think the Army and Navy Stores are selling blends of malt and grain?—I think they are now.

7011. There is another catalogue that I have in my mind from a place that has a very large sale for whiskey, and I noticed there that there was a range of prices and a range of quality under the heading of "Pure Malts," and a range of quality and a range of price under the heading of "Blends of Malt and Grain," but at the same time the distinction was made. Do you see any objection to that being done?—I do not see any objection to any man doing that if he wishes to do it, but I do object to it being made a legal restriction.

7012. These gentlemen have presumably done it because they thought it was in the interests of the trade, and in the case of the Civil Service Stores that it was in the interest of the consumer?—Yes, and I know a great many men who have sold pure malts and almost in every case they have told me they are disappointed with the results.

7013. (*Dr. Adeney.*) You have told us that in your opinion patent still spirit is very lightly flavoured?—Yes.

7014. Does that obtain with patent still spirits from Ireland as well as from Scotland?—I should take it they are much the same. I have got no skilled experience of it, but I take it their process of manufacture is much the same.

7015. And flavours? You would not expect a great difference in flavours?—No.

7016. Not as in the case of the pot still?—Nothing like.

7017. Would it be wise then to give the name "Scotch" to a patent still spirit?—That is a question of tradition and what right they have to it. If they have made it all in Scotland as Scotch whiskey I do not know that we have a right to take it from them.

7018. Do you not want protection for your best manufacture in Scotland, and would you not sympa-

thise with the Irish pot still distiller in his desire for protection for the best Irish whiskey?—I do not know what the protection is we want for Scotland.

7019. I mean generally in reputation. You depend on the flavour of your Scotch malt for your world-wide reputation for Scotch whiskey?—Certainly, but we do not want it to be too full flavoured for the public wish.

7020. I am now talking of grain spirit quite apart from the malt?—You mean the sale of grain spirit pure and simple.

7021. Yes?—I think the sale of grain spirit pure and simple with our world-wide reputation we can afford to ignore because nobody would drink grain spirit, that is to say, nobody who will give a price that is worth receiving.

7022. But if it is allowed to be called Scotch whiskey you are open to the danger of it being sold as Scotch whiskey?—We have at present a grain whiskey of a few months old being sold with a common malt a few months old—95 per cent. of grain—which I do not think is a good advertisement for Scotch whiskey; it is very much the reverse. I should be very glad, and the whole of the trade, I think, would be very glad to see that very common stuff stopped and to a certain extent the age limit would do that.

7023. Am I right in the impression I have got that this grain spirit when you call it Scotch whiskey is merely trading on the reputation of the pot still whiskey and similarly in the case of Ireland, whereas with regard to the Scotch grain spirit and the Irish grain spirit there is really no distinct difference between the two?—I think the trouble comes in with the buyer who wants something very cheap. When he has got to a certain stage the question of diluting the Scotch whiskey goes out and the question of cheapness alone comes in, and a certain class of distributor will ask for the cheapest he can get, quite regardless of quality but mainly regarding the price.

7024. Would you be inclined to exclude the term "Scotch" being applied to such a spirit as you describe?—I do not see where you can draw the line; that is the trouble of it. I should be very glad to exclude them.

7025. You think it ought to be done, if possible?—Yes, but I do not see how it can be done.

7026. It is the practical difficulty in your mind which prevents your recommending it?—Entirely. I should very much like to see that very cheap Scotch whiskey stopped altogether, and I think all the trade would.

7027. In your reply as to the unsuitability of Highland malt whiskey for consumption as a self whiskey, do you refer to all Highland malt whiskies?—Oh, yes; because I think, as I have already said, that probably my own brand is one that is most suited for consumption as a single whiskey, and because it is of great age, and is more suitable for a man who drinks very very little. We have found that the general public prefer it without so much flavour.

7028. Is that true of the Lowland malt whiskies?—The Lowland malt whiskey is lighter, it comes in more cheaply, and it matures quicker, and you will probably drink Lowland malt whiskey when 5 years old when you would not drink ours till it was 8 years old.

7029. To that extent there is not the same necessity to blend the Lowland malt as the Highland malt?—No, not to the same extent. It is lighter whiskey.

7030. It is possible for the Lowland malt to be consumed in London, for instance, and give satisfaction to the consumer?—I do not think for a moment that a pure Lowland malt would compare with a Highland malt blend. A blended Highland malt would be superior to a pure Lowland malt.

7031. I take it it is similar to the case of Irish pot still whiskey. There is not the same necessity for blending those. Those are suitable for consumption as self whiskey?—But I take it in the same way they have got to be of far greater age to thoroughly mature.

7032. That brings to my mind the statement that Mr. Pheysey made to us. He was asked what class of consumers he was referring to when he said that the greater part of his trade was done in pot still whiskey—malt in the case of Scotch and pot still in the case of Ireland—and he told us that his consumers included all classes of the community, the working man as well as the rich man, and still there was in his experience that desire for the pot still whiskey. I am speaking from memory, but that is the impression he gave me?—I did not know before that any working man was a member of the Army and Navy Stores; that is news to me. They take in most classes, but I do not think they take in the working man.

7033. I think your statement that the malt whiskies are too highly flavoured for consumption as self whiskies requires a little modification?—They are too highly flavoured unless you get them of an age which brings them out to a price which the ordinary consumer would not give. He expects to buy whiskey at 42s., or something like that, and he refuses to pay 48s., or 54s., or 60s. If he will only pay 60s., which would be only 5d. a glass, he would get the right stuff.

7034. (*Chairman.*) 60s. for what?—60s. a case. If a man pays some price like that, or not quite so high as that, he would get the right stuff.

7035. How much is that per gallon?—30s.

7036. With duty?—Yes. There are two gallons to the case. If he is willing to pay some price like that he could then consume a great deal more of pure malt whiskey, but people grudge that price. They will give the price retail, but they will not give it for their own household. It is only 5d. a glass, and they will pay 6d. a glass for probably much inferior whiskey.

7037. That is for themselves?—If you are in an hotel you will pay 6d. a glass, but you will not give 60s. a dozen for whiskey for your own house, which is only 5d. a glass.

7038. How long does your experience and knowledge go back to the practical working of the trade?—23 years—from 1885.

7039. I understand that when you commenced you were selling more pure malt whiskey than you do now?—We sold a good deal more in the old days. It has decreased very much.

7040. Has your pure malt whiskey got to a very small quantity?—It is a small quantity, but it has been in the last two or three years slightly increasing from that very question of price. Some people nowadays are giving higher prices, 54s. and 48s., and the pure malts are selling a little more because of that.

7041. To what do you attribute the diminution of the sale of the pure malt whiskey? Is it the price, or is it the public taste?—A combination of the two, but the price has certainly a very strong influence because the public will not give a price which will enable them to get pure pot still of the proper age.

7042. Then by effecting this blend has your business increased?—In the single whiskey it has decreased, but we deal far more with blenders than we did before.

7043. But by selling whiskey for blending has your business increased?—The business in Scotch whiskey generally has increased. We cannot speak individually because, as a matter of fact, in my own time there have been nearly 50 other distilleries built. We have a great deal more competition, but the actual consumption of Scotch whiskey has increased enormously.

7044. Is this the result in your view that anything that stops the blending of whiskey would be disadvantageous to both the trade and the public?—Most decidedly.

The witness withdrew.

Mr. A. Walker

5 May 1908.

Mr. ALEXANDER WALKER, called.

7045. (*Chairman.*) Are you one of the Managing Directors of John Walker & Sons, Limited?—I am.

7046. I believe you have places of business in Scotland, London, different places in England, and Sydney?—Yes.

7047. You own two distilleries?—Yes.

7048. Where are your distilleries?—At Cardow, Speyside, and Annandale.

7049. In what part of Scotland are they?—Cardow is in Speyside and Annandale is in Dumfriesshire.

7050. I believe also your firm have an interest in several other distilleries, both pot and patent still?—Yes.

7051. You have read the evidence that has been tendered to the Commission, and you have also attended meetings of your Association?—Yes.

7052. I think you wish to state that you express your views for yourself personally?—Yes.

7053. You may not be in accord with others?—Yes.

7054. Do you wish to preserve and see preserved the term "Scotch Whiskey" in the trade?—Yes.

7055. Under what conditions? What do you think Scotch whiskey, if it bears that name, ought to be made of?—I think that Scotch whiskey, in order to entitle it to that name, should have a high proportion of pot still malt whiskey as its basis.

7056. Can you give us any assistance as to the proportion?—I have not put in the proportion. I have mentioned a proportion at several meetings. I have mentioned the proportion of 50 per cent.—that it should be the predominant partner of the blend.

7057. Why have you made that qualification?—Because I believe the characteristics of Scotch whiskey are entirely got in the pot still. The character of Scotch whiskey as known is only got in the pot still.

7058. In whose interest are you asking for the 50 per cent.—the producer or the public?—I am entirely asking it in the desire that the public should get value when they ask for Scotch whiskey without definition, and that they should get a certain standard of value.

7059. Is it then that the customer should only pay a fair price for a particular article that you make the demand for 50 per cent.?—I do not follow you.

7060. Is it only then upon the question of price that you make the demand that there should be 50 per cent. of malt?—Yes.

7061. Who is the consumer you are thinking of? Is it the person who buys, like the publican, a cask of whiskey, or the person who buys a bottle, or the person who goes up to the counter and asks for it?—All three.

7062. Why should he not have, if he is told the truth, a whiskey with only 20 per cent.?—What I mean to indicate is this, that assuming a buyer, say, a publican, or even an individual, goes in and asks for Scotch whiskey without defining it in any way whatever, then he should at least get a whiskey containing 50 per cent. made in the pot still.

7063. I hear you say so, but I want your reasons for saying so. Why should not a man have 20 per cent. of malt instead of 50 per cent.?—Because it holds less of the characteristics which I deem necessary to give it the definition.

7064. What are the characteristics? Are they characteristics that produce health or produce intoxication quicker?—There is no distinction with regard to intoxication between the one spirit and the other spirit at all as long as they are of the same strength.

7065. I understood pot still whiskey was stronger than the ordinary patent still whiskey?—Stronger in flavour but not stronger in ethyl alcohol.

7066. In intoxicating qualities?—No, I do not think so at all.

7067. You have put your standard at 50 per cent. Is that the view of others besides yourself, or is it your own view?—It is the view of a good many others.

7068. Would you allow whiskey to be made with less than 50 per cent. of pot still?—Undoubtedly.

7069. And you would allow it to be sold?—Yes.

7070. It would not be deleterious to the consumer?—No, my lord, not at all, so long as it was two years old.

7071. Then it is only with you a question of the knowledge of the consumer?—I cannot follow you there.

7072. I am asking you for your reasons, and you have just told me that what you want is that the consumer should have a certain quality. You say it will not injure him if he has it with a smaller amount of malt. Is it only this knowledge that you wish the consumer to have?—I wish him to get value. It is his pocket interest, not his health interest.

7073. That is knowledge, is it not? How would he be able to check it unless he knows what he is getting?—Exactly.

7074. That is really what I am putting to you, but you do not seem to appreciate it. That is what you intend to say?—I could not hear you very well.

7075. What you stand by is this, that in the whiskey that is sold there should be 50 per cent. of malt in it?—Yes.

7076. You wish some steps to be taken by which the purchaser, the consumer, should know whether there is 50 per cent. in it or not?—Yes.

7077. You do not object to there being less than 50 per cent. if the consumer knows it?—Quite so.

7078-9. What steps do you suggest should be taken to let the consumer know whether there is 50 per cent. or not?—I think the same steps that are taken to advise him when there is more than a higher percentage of water than puts the strength at 25 under proof. At present whiskey may not be sold under 25 degrees under proof without being defined, therefore I would ask an indication also that the seller should not sell less than 50 per cent. of pot still whiskey without also indicating that fact.

7080. (*Dr. Adeney.*) Scotch whiskey?—Yes.

7081. (*Chairman.*) Are not the two things different? Water can be found out pretty quickly, but how would you test the question whether there is malt to the extent of 50 per cent., or malt to the extent of 25 per cent.?—Entirely by permit.

7082. How is that permit to be obtained?—If you are blending in the Excise warehouses, as long as the whiskey had 50 per cent. of pot still malt whiskey it would be permitted as Scotch whiskey without any further definition. If it held less than that the definition would be stated on the permit. The publican, or the retailer, would therefore know exactly what he was selling from the permit, and he would be obliged to state that fact on the vessel or otherwise from which he was serving it.

7083. There is a good deal of blending that does not take place in the Excise?—A very small proportion.

7084. A good deal I think?—I reckon inside of 10 per cent.

7085. Would you be satisfied with the permit stating "This is Scotch whiskey; it has 50 per cent. of pot still malt," but not saying whether it has 40 per cent., or 30 per cent., or 20 per cent., or 10 per cent.? You do not want that differentiated?—No. I am speaking of the broad definition.

7086. Then you will not carry out your object quite, because the customer would only know it was 51 or 49 and would know nothing more, and would not know whether he was getting 40 per cent., 30 per cent., 20 per cent., or 10 per cent.?—That is so. I am only indicating a broad line of distinction between one grade and another.

7087. I quite see that, but I want to see whether that broad line will carry out your view. Your view is that the customer should know what he is getting?—Yes.

7088. But he will not, will he, under your broad line?—It will assist very largely to define a blend as between a high grade and a low grade. In the average licensed house there are not many grades sold. They are, as a rule, divided into two grades—the tap whiskey and the better-class whiskey. The customer may go for the better-class whiskey and get a tap whiskey, and what I suggest is in order that he may be able roughly to define.

7089. I quite see that, but it does only give a very rough protection to the consumer?—Yes.

7090. Is there any method you can suggest by which you can carry your theory further into effect and let the customer know more than the fact that it is above 50 per cent. or below 50 per cent.?—No, it is too complicated to my mind. I wish it was possible, but I do not see that it is possible. I indicated a rough line that seemed to me possible to carry out.

7091. You seem to give the pot still a good deal of preference over the patent still?—I maintain that pot still is the original Scotch whiskey, and has all the characteristics which have been attributable to Scotch whiskey.

7092. Do you agree that in later years there has been a far greater amount of blending than existed previously?—Undoubtedly.

7093. To what do you attribute that?—I attribute the necessity for blending, in the first instance, to the fact that it is impossible to make whiskey in a pot still without getting much too great a flavour. You cannot reduce the flavour sufficiently to be sold *per se*. The grain whiskey, which can be made with a very small proportion of secondary products, may be admixed in order to bring down the flavour to a certain extent and keep it within popular taste. That, of course, has gone on increasing as the popular taste has gone to lighter articles.

7094. Has the popular taste changed?—Yes, undoubtedly to my mind.

7095. In what direction has it changed?—Towards getting a more refined article.

7096. And that is by putting a considerable quantity of the patent still into the pot still?—Yes.

7097. Public taste has produced that effect?—Yes, undoubtedly.

7098. Why will not you let the public taste deal with its own consumption instead of asking for legislation saying that it should be 50 per cent.?—It seems to me that there is an attempt to go beyond the public taste and introduce the patent still to such an inordinate extent as to probably destroy the public taste and make them forget what Scotch whiskey originally was altogether.

7099. To lose faith?—Yes, that is the danger, I think, and I think that is felt by a large number in the trade.

7100. If you can let the public deal with its own commodity according to its own health, as a general principle you would prefer that to legislation, would you not?—Yes, I think I would. If legislation is to take place I indicate lines on which I think it would be preferable from the general interests of the trade.

7101. But are you quite sure that legislation ought to take place?—No, I do not think so, except with regard to a certain age limit. I do think that.

7102. What do you say as to the age limit?—I give two years as a fair and reasonable age necessarily.

7103. The same for pot and for patent still?—The same for pot and for patent still.

7104. Do you say that is in the interest of the public, that they should not be allowed to drink a newer whiskey than two years old?—I will give you my feeling in the matter. In looking at whiskies, which I have done continuously for 20 years, which is my province, and I do practically nothing else but make samples, I notice invariably with a new whiskey a rapid ether seems to come off the spirit which in two years has disappeared. I cannot give you any more description than that. It is all done by the nose, and the ether seems to strike the nose, but it disappears in time. I cannot tell what it is, but I have invariably seen it throughout my experience.

7105. So far as you can judge, would the existence of that spirit be injurious?—It seems to me it is a highly volatile ether which would go to the brain very quickly if consumed.

7106. That would be very different from anything you would find in wine, I suppose?—No; I find in wine there is something similar.

7107. In a new wine?—Yes.

7108. What wine are you speaking of?—Claret—Bordeaux wine.

7109. Do you recommend that we should legislate against claret?—I do not think it is so much in claret. Possibly, historically, my feelings may have leant that way, but I have certainly noticed it, and continuously noticed it.

7110. What do you say to the use of a pure grain whiskey, that is to say, a patent still whiskey?—I think it is perfectly entitled to be sold as grain whiskey.

7111. Pure patent still?—Pure patent still.

7112. How can you describe it to an ordinary person?—Grain whiskey.

7113. But would you give it to a friend to drink?—No, I would not in my house.

7114. I suppose, to use a colloquial term, pure patent still whiskey is not very acceptable—it is rather poor stuff?—Yes. It is sold to the very lowest class trade.

7115. The middleman obtains it very cheap?—Yes.

7116. And, of course, you can quite see if he sells that very cheap whiskey at the same price at which he is selling the very high priced whiskey, somebody is getting the benefit?—Yes.

7117. And you think the public ought to be protected against that?—I think legislation is necessary.

7118. (*Dr. Cushny.*) Would you call grain whiskey Scotch whiskey?—No, I would call it grain whiskey.

7119. Would you not have to differentiate between Scotch and Irish whiskey?—Yes, I would allow it to be called Scotch whiskey, but the word "grain" should be introduced to define it.

7120. Are you blenders or merely distillers?—Both.

7121. You say in the *précis* of your evidence that your Company blends in three qualities and ages?—Yes.

7122. Is it simply a matter of age and quality?—Yes, entirely.

7123. (*Dr. Adeney.*) I have been asked to put some questions on Mr. Guillemard's behalf. I do not know whether you have given us any evidence as to a minimum quantity of malt in your mash?—No. I mentioned it in my *précis*.

7124. What was that minimum quantity?—30 per cent.

7125. If this minimum quantity of malt be required by law to manufacture grain whiskey, would it not be necessary to ensure that the law was being complied with, and that the materials at every distillery should be kept under close Revenue control?—I think the general regulation would not require that close supervision that you indicate.

7126. What machinery would you suggest?—Occasional measurement.

7127. By Excise officers?—Yes. At present the grain distillers are using 30 per cent.—at least, that was given in Mr. Ross's evidence. That being so, the desire of the trader is that if grain whiskey is used as a dilutant and if the Scotch whiskey is only to be made in Scotland, which is part of my *précis*, that the grain distiller in Scotland should be obliged by regulation to make it according to his present method which satisfied the trade; that he should not have full liberty in his mash tub to make it with any article he desires. We do not believe in conversion by acids.

7128. But still that product you would only allow to be called grain whiskey or Scotch grain whiskey? You would not allow the product to be called Scotch whiskey?—No, not *per se*.

7129. You do that in defence of the reputation of the Scotch pot still whiskey?—Quite so.

7130. And that reputation is of trade value in foreign countries as well as in England?—Yes, the prestige value of Scotch whiskey in foreign countries is an enormous asset of Scotland.

7131. And you stand in danger of losing that if grain spirit is sold as Scotch whiskey?—We do.

7132. You define pot still as a still heated by direct fire. This definition would exclude a still heated by steam. Is that your suggestion?—That is so.

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7133. You require that the pot still should be heated by direct fire?—That is so.

7134. Do you give that as the result of your experience or as an impression?—My experience. I have not seen the essential flavours that I consider requisite from a still heated by steam.

7135. And you have had experience of the product?—I have made comparisons regularly.

7136. With regard to the suggested compulsory bonding in wood for two years, would you require this to be done for spirits intended to be made into gin and compounds?—Either so or an extra duty of 6d. per gallon would be required to be imposed.

7137. Manufacturing chemists use large quantities of spirits. How would you deal with them?—I think that the manufacturing chemists can get spirits without a duty payment.

7138. Under some conditions, but limited conditions?—There is no necessity to keep their spirits for manufacturing purposes at all. I am referring to potable spirits entirely.

7139. If all spirits were required to be kept in wood for two years, how would it be possible to supply spirits at a high strength, such as are required for various purposes? I take it that you would say that those are not potable spirits?—No; It is potable spirits only that I am referring to.

7140. Now, I should like to ask you a few questions on my own behalf. Do I gather rightly from you that you regard blending as simply diluting?—I do.

7141. Diluting with a comparatively flavourless spirit?—I am following your line of argument, but I should say that blending, of course, is a very large question which I could speak for a considerable time upon. It means a good deal more than what you say. I am simply following the line of argument as between pot still and patent still.

7142. I would be glad if you would keep me correct on the real value of blending?—To my mind it is impossible to sell a single whiskey owing to its enormous variation in quality week by week.

7143. Is that from the same distillery?—Yes, and year by year. Every week varies and every year varies. The consequence is that the blender has come into his position because he is drawing from so many sources.

7144. A distinctly legitimate position?—Yes, I meant to have submitted samples, but probably the Commission do not desire it, showing the fact that by using pot still malts alone which we have endeavoured to do we cannot prevent discoloration, and of course, as you know, the public will not stand discoloration.

7145. You mean turbidity on mixing with water?—Yes. Immediately you mix a fine pot still whiskey with water simply containing a shade of lime you get discoloration.

7146. That is turbidity?—Yes, turbidity is rather a strong word. You get opaqueness and then you get this question of over-flavour which the public will also not tolerate.

7147. (*Dr. Cushny.*) Do you get turbidity with Highland water or only with London water?—Our own local Kilmarnock water is almost entirely free from lime, but even there you get it.

7148. We have been told it is a peculiarity of London water?—I think when you were up in the North you were shown samples affected by peat water which is entirely soft, but it showed this opaqueness at once. I can show you the samples.

7149. (*Dr. G. S. Buchanan.*) The objection is in no sense an objection that it alters the flavour of the whiskey?—No, it simply prejudices the buyer when he sees this milkiness in the glass. You may be giving the very finest article made from the pot still, but when the buyer sees it in a glass, especially in the south of England where there is chalky formation, it turns opaque and he refuses it at once.

7150. We were told it was a test of excellence if the public only knew?—It is a test of excellence if they only knew.

7151. (*Dr. Adeney.*) Then blending to this extent is a perfectly legitimate operation and is an improving operation?—Undoubtedly.

7152. But in order to protect the value of the term "Scotch" for your whiskies you would limit the amount of grain spirit to be used in blending?—If it was not legitimate to use the patent still to that extent, then I should certainly recommend pot still pure and simple, but we have tried it and we have absolutely failed to sell pot still whiskey by itself, and we have to use the patent still in a certain proportion, and that proportion to my mind should be strictly limited to the necessity of reducing the flavours and of getting rid of this discoloration. Beyond that it may be used, but it should be defined and stated.

7153. You do not think it would be necessary to call it Scotch blended whiskey?—To my mind that, to some extent, prejudices the public. The use of the word "blend" may be used over a very very wide variation as has been illustrated by other witnesses.

7154. Probably there is a sufficient protection of pot still whiskey in the term "malt whiskey"?—Yes, that is so. They can use that at present.

7155. And that is well understood?—That is well understood.

7156. Do you know anything about Irish pot still whiskies?—I have seen them.

7157. Have you had any experience in the trade with them?—Very small.

7158. You do not know whether they also require blending in the same way that you speak of?—No, but I should fancy they do from what I have seen. I would rather not speak of Irish distillers. My experience is not wide enough.

7159. With reference to grain spirits do you know of your own knowledge whether there is any marked difference in flavour between Irish grain spirit and Scotch grain spirit?—No, I think there is practically none. It may vary a shade of a per cent., but it is a mere shade.

7160. There is nothing in calling it grain spirit, either Irish or Scotch? It would stand by the name of grain spirit by itself?—Except this, that it is our desire in the trade in Scotland to oblige the grain distiller in Scotland to make his goods up to a certain standard. We should like that standard regulated. They do at present do it, but we do not know the day when with a free mash tun they may vary it.

7161. You think with the minimum amount of malt that you take that it might continue?—Yes, and we think with that protection the standard of patent still spirit in Scotland would be beyond that made in the rest of the three kingdoms. The average standard of Scotch grain whiskey is higher than the others; the effect of the malt is noticeable in the whiskey, and that effect we think very desirable, and we should like it regulated.

7162. (*Dr. G. S. Buchanan.*) You told us that your company of John Walker and Sons supply brands in three qualities and ages, which are well known both in home and foreign markets. Are those your proprietary whiskies that are sold in bottles?—Yes.

7163. You have three kinds of whiskies, each sold with a distinctive label?—Quite so.

7164. Have you had any instances in which you have required to see whether the retailer, the publican, has been tampering with the whiskey he has sold out of the bottle as Walker's whiskey?—Yes, we have had many cases.

7165. What do you rely upon to detect any fraud of that kind?—We rely on my knowledge of the whiskey by sampling.

7166. By taste?—Yes.

7167. Or by diminution of alcoholic strength?—Yes, and besides that we standardise the colour of our goods, and we standardise the proportions of malt, and we can tell at once by nose if there is a variation.

7168. (*Dr. Adeney.*) Standardising the colour is easy to effect?—Yes, very.

7169. (*Dr. G. S. Buchanan.*) You have not had any cause to utilise chemical analysis in that connection?—We have used it in order to satisfy ourselves whether chemical analysis was possible. We have had it analysed not only here but in the Colonies and elsewhere.

7170. (*Dr. Adeney.*) Have you analysed exactly similar tasting whiskies to your own production?—No.

7171. In order to show whether there was any concurrence of judgment that one could draw from the analysis and taste of samples of whiskies of like taste and method of production?—No, it is not possible.

7172. It would be possible to try it, and I was wondering whether you had had that done?—No.

7173. (*Dr. G. S. Buchanan.*) Then, besides your large trade in the proprietary whiskies and blends, I take it that you supply retailers and publicans?—Yes.

7174. Would I be right in thinking that one reason why you would welcome a 50 per cent. limit, if any limit was made, is that it would assist you in the interests of what you regard as good Scotch whiskey in resisting pressure to supply cheaper articles for public-house sale?—Of course, there is the continual pressure of competition towards lowering prices going on in every business. That continuous pressure is likely to have the effect, and has had the effect, of making people use the cheaper grades, and using more and more patent still, and disguising the fact that there is so much patent still in the blend, because nobody can tell at present.

7175. (*Chairman.*) In what sense do you say there is too much—too much for taste or too much for health?—Too much for description. I am dealing entirely with misdescription.

7176. (*Dr. G. S. Buchanan.*) Assuming that a 50 per cent. minimum limit of the amount of malt whiskey that was to be allowed in Scotch whiskey was arranged for, I understand that you consider there is no difficulty in checking the proceedings of the blender in regard to description and labelling by the Excise officers in the bonded warehouse?—No.

7177. There is no trouble about that?—No.

7178. The Excise officers can see whether the casks that go out are properly invoiced, or whether the bottles which go out are correctly labelled?—Yes.

7179. Then the case of blending in a duty-paid warehouse would be a more troublesome thing, would it not?—That is so. Of course, the proportion of blending in a duty-paid warehouse is small. If the penalty for altering the standardisation was large, or if the man's licence was affected, or if his trade was affected, it would be a sufficient deterrent to prevent anything of that kind being done

7180. At the same time some check would be necessary in those circumstances. Perhaps you can suggest something from your own experience. Do you do any mixing in duty-paid warehouses?—No.

7181. You cannot tell me whether it is the custom in such places to keep an exact record of the whiskies that are blended?—I cannot tell you what other firms may do in that respect.

7182. One may assume that it would be probable that any trader who was mixing whiskies of different descriptions would keep an account of what he had done?—Quite so. He would naturally do so in his stock book.

7183. Then when it comes to a step further, and you have got the whiskey going to the publican, can you tell me whether the publican very often mixes and does his own blending in some sort of way?—It is rare. It does occur, but it is rare.

7184. (*Dr. Horace T. Brown.*) He reduces the strength always?—Yes.

7185. (*Dr. G. S. Buchanan.*) In ordinary circumstances if the publican merely sold the whiskey as he received it from the blender and the blender gave him an invoice describing the whiskey and the blender's invoice could be checked, you would have the sort of control that you are speaking of?—You would have the history of the goods from the beginning. The temptation or the amount of money involved would not be so very great as to make it worth his while to risk his reputation and the penalty involved.

7186. It would be quite a different matter to his adulterating or altering the whiskey so as to get a considerable direct profit on every gallon. The profit from misdescription would be an indirect one, and only one that would tell in the long run?—Quite so.

7187. (*Dr. Horace T. Brown.*) I do not quite understand what is the particular virtue of the 30 per cent. of malt in the mash used for conversion?—In the grain spirit?

7188. In preparing the grain spirit?—It is the virtue of setting the standard as it at present exists, and which is satisfactory to the trade. The trade in Scotland feels the prestige value attached to the Scotch whiskey trade which they are anxious to protect; they are satisfied with the present production in Scotland because, as a matter of fact, those principally interested in the Scotch trade are largely interested in the patent still companies. They therefore have exercised some control over the article they are buying, and if it was known now that any Scotch grain distillery was using those materials, which it is stated have occasionally been used in Scotland, I am satisfied they would no longer do the trade with the blenders.

7189. I am not speaking of those materials other than cereals. I am merely speaking of the amount of malt which you propose to limit?—We are anxious that the conversion should take place entirely by malt instead of possibly by acids.

7190. It is a question of the 30 per cent. What is the special virtue of 30 per cent. over 25 per cent. or 35 per cent. or 40 per cent.?—We ask to standardise the existing percentage—that is all.

7191. That is to say, you wish to stereotype the present process of manufacture for all time?—Yes.

7192. And to say that a man, no matter whether he is able to produce spirit of exactly the same character with 10 per cent., should not be allowed to do it?—I am not so strong upon this point. I mention it because it has been brought up in the trade and agreed to by the grain distillers, but I do not think this point with regard to the 30 per cent. of malt is so essential.

7193. You would regard the other as absolutely essential, that is, that the distiller should be confined to cereals?—Yes, and that he should convert with malt and not with acid.

7194. But you do not think so strongly on the amount of malt that should be allowed?—I think cereals also should be defined. There is undoubtedly a prejudice against the use of rice.

7195. To what is that prejudice due as far as you know?—I think it is due to seeing the spirit that has been produced from rice.

7196. That is a spirit made on such totally different lines that it could not be used for comparison. Can you give me any reason why, if a grain distiller wishes to use a certain proportion of rice, he should be forbidden? Is there any reason?—Not to my definite knowledge.

7197. *Chairman.*) Do you blend at your premises?—Yes.

7198. How far back does your experience go either by knowledge or record?—Twenty years.

7199. You have interests in the production of both pot still and patent still whiskies?—Yes.

7200. Has the proportion of your production of those two commodities changed in the twenty years?—It practically has remained unaltered.

7201. You have not found the demand which represents public taste alter?—Our variation has been very slight. The public demand with us has indicated certain lines, and we have modified the secondary products. There are pot stills and pot stills. There are some pot stills giving high secondary products and some giving lower. We have used and transferred from the higher product pot stills to the lower, and so again with public taste, without altering our proportion of pot still.

7202. That produces the same result, but according to your knowledge the public taste has gone in favour of a less strong or less pungent commodity?—Yes.

7203. That is shown by aërated water being mixed with it?—I do not know that that has anything to do with it.

7204. It does not change your absolute distinction between pot and patent still, but you alter your pot still to meet the public taste?—Yes. I think my 50 per cent. allows sufficient variation for the public taste.

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7205. But that 50 per cent. is quite apart from the quantity of the pot still to the quantity of the patent still?—Yes.

7206. (*Dr. G. S. Buchanan.*) I should like to ask you one question with regard to a paragraph in your *précis*. When you advocate the ageing of whiskey for two years, you do so not merely in the interest of giving a mere healthy spirit, but you do so on the ground that the consumer would benefit by getting a better article, do you not?—Yes.

7207. You say, "The public interest may be affected if an unlimited proportion of grain be used in excess of the necessary proportions to effect the objects previously defined"?—Yes.

7208. (*Dr. Adeney.*) You admit that you would allow the name of Scotch whiskey to be applied to a blend containing 50 per cent. of malt, and that blending is necessary to meet the taste of the consumers for an older whiskey?—Yes.

7209. But that still contains the essential characteristics of the Scotch flavour?—That is so.

7210. The blending does not mask those, but simply slightly dilutes them?—It may also have the effect of bringing out the flavour. It has that effect.

7211. (*Dr. Horace T. Brown.*) You referred to a certain pungent flavour which new whiskey possesses, and which disappears with age. Is that the same quality of flavour as what is known as "ethery" whiskey?—No. It is of that nature. That is the reason I give it the name "ether." It is exactly of that nature, but it is very very slight—I mean compared with the ethery whiskey.

7212. It is the same general quality of flavour?—Yes.

7213. And that disappears on ageing in the case of the new whiskey?—Yes.

7214. Will you explain to the Chairman what is meant by an "ethery" whiskey?—I am not a practical distiller, but I have seen this "ethery" whiskey so continually. Dr. Schidrowitz has explained at a meeting of the Association what it was due to—whether rightly or wrongly—and he says it is some fault in the fermentation. This ether comes off in such volume that it is almost impossible to bear it either in the eyes or in the nose. It is due to a mistake in fermentation, which is rectified, but in effect it is very similar to the character of ether that I have spoken of. It is very similar, and it has the same effect on the nose.

7215. (*Chairman.*) Injurious?—It appears to me injurious.

7216. Not agreeable?—No. The effect of such whiskey on the palate is doubtful. The arguments before the last Committee were such as to divide very much one side and the other as between new and old whiskey, but it appears to me it is that, if anything, that affects the brain in the consumption of new whiskey.

7217. (*Dr. Adeney.*) Has it been suggested that this ethery whiskey is due to the formation of a body known as formic aldehyde?—I am not a chemist, and I should not like to say.

7218. (*Dr. Cushny.*) I did not understand that you were going to prevent the publican from blending in his own premises. Supposing he got a cask of 50 per cent. Scotch whiskey and a cask of 95 per cent. patent still and 5 per cent. pot still, how are you going to find out whether he is mixing them, and whether he has got two Scotch whiskies?—The publican would know the law and would know the penalties. It may be that the temptation to do so, and what he would gain by doing so, would be so slight compared with the enormous risk he would run.

7219. (*Chairman.*) What would be his offence if he did what my colleague has asked you?—It would be similar to the case raised in the Islington case—misdescription.

7220. You would say, then, that if a man came in and said "Give me a glass of whiskey," he would be right in giving it to him; but if the man asked for Scotch whiskey he would be wrong?—Yes.

7221. A good many people do ask for whiskey?—Quite so.

7222. (*Dr. Horace T. Brown.*) Would you not be expected to ask for grain whiskey, if it contained more than 50 per cent.?—He would ask for whiskey, and if he asked for whiskey, then he is entitled to get what is entitled to the generic name of whiskey, which is anything at any price.

7223. (*Dr. G. S. Buchanan.*) Your case would depend on his putting up a notice, would it not, if he sells anything which is not Scotch whiskey?—That is so.

7224. He has got to put up a prominent notice to the effect that it is Scotch grain whiskey, just as he now puts up a notice that he does not sell spirit merely as spirit, but he sells it as spirit and water?—Yes. If he sells under 25 under proof he must indicate that in his premises. It is rare that a man would take the risk of public opinion by putting up that notice, but if he likes to take the risk of public opinion, and state what he is selling, then he is within the law.

The witness withdrew.

Mr. J. T. Townsend.

Mr. Joseph Travis Townsend, called.

7225. (*Dr. G. S. Buchanan.*) Are you Chairman of the West, South and East of Scotland Malt Distillers' Association?—I am.

7226. Can you tell us what that Association comprises, or, rather, what does it not comprise in malt distilleries?—It does not comprise the North—Speyside and all that district to the North, nor Campbeltown.

7227. But it does include Orkney?—I happen to have my residence in Glasgow, and therefore it is convenient for me to attend, and several other of our members who have their business premises in Glasgow but have their distilleries in the North, such as Mr. Walker, belong to our Association.

7228. You built a distillery in Orkney in 1885?—That is so; the Scapa.

7229. You have been sole proprietor of it since December, 1887?—Yes.

7230. You make pure malt whiskey there?—As far as I know.

7231. What is its type broadly?—That is a question I would rather you asked the blenders, because I hardly care to advertise my own goods.

7232. We have been told that malt whiskey is generically divided into Highland malt, Lowland malt, Islay, and Campbeltown?—Then it should be described as Highland malt and Lowland malt in that case.

7233. You were agent for over 20 years of Linkwood Glenlivet?—Yes.

7234. Is that a distillery now working?—Yes.

7235. And also you were a director for several years of that distillery and of Convalmore, which are both pure malt distilleries?—Yes.

7236. You were Managing Director of Ardgowan Distillery, Greenock, from its inception in 1887 to its amalgamation with the Distillers' Company, Limited?—Yes.

7237. That is a grain distillery?—Yes.

7238. What, in your opinion, should the term "Scotch Whiskey" cover?—I think the term "Scotch Whiskey" should be applied to a beverage which is suitable to the public taste and health, from cereals made in Scotland.

7239. Do you advocate any limit of malt whiskey in Scotch whiskey?—Personally, from my own experience, I do, because I prefer a blend which has a considerable amount of malt in it, but I have no experience as a blender in supplying the public.

7240. You cannot speak for your Association in advocating a minimum quantity of malt? They are not agreed upon that?—Collectively we were, but individually we were not. Collectively we agreed that it would be advisable to standardise, if possible, Scotch whiskey, and to standardise that as high as ever possible.

7241. (*Dr. Adeney.*) Do you give any particular value to that standard?—Personally, I do.

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7242. (*Dr. G. S. Buchanan.*) May we have your personal opinion?—My personal preference is for, say, 50 per cent. of a high class malt and 50 per cent. of a good well-matured grain.

7243. (*Dr. Adeney.*) Do you say that because that gives you the distinctive Scotch flavour?—It not only gives the distinctive Scotch flavour, but it makes a pleasant beverage. If I drank pure malt alone (I am talking of high class whiskies), the result is not pleasant and sometimes disastrous.

7244. (*Chairman.*) To you?—To me personally.

7245. Do you mind telling us what the disaster was?—It is rather a long story, but I suffered from a bad mouth.

7246. (*Dr. Adeney.*) You have given us your opinion as to a pure malt. What is your opinion as to pure grain spirit?—I have had very little experience there, except once or twice I have drunk pure old Port Dundas with great age on it and found it quite pleasant.

7247. That is quite an exceptional grain spirit?—Yes.

7248. Why was that spirit kept so long if there was nothing special about it?—It improves by age.

7249. Does all grain spirit do that?—Oh, yes.

7250. (*Dr. G. S. Buchanan.*) Then I understand your evidence to be this with regard to Scotch whiskey, that it should be whiskey made in Scotland and from cereals, and that you personally would have no objection to a standard of 50 per cent. of malt whiskey in all Scotch whiskey?—Yes.

7251. At the same time there is one other point you refer to in your *precis* which I should like to have upon the notes. You say "I have a personal preference for blends, as no single whiskey, especially the better class malts, has yet proved successful on the market. Pure malt blends are largely made up of Lowland malts, and the latter are made as silent as possible." Have you had any experience in distilling silent malt whiskies?—None whatever.

7252. You tell us also you thoroughly approve of an age limit and think that a minimum of two years should be enforced at once. On what grounds do you advocate that?—Because I consider that age is part of the process of manufacture.

7253. (*Dr. Adeney.*) Does that refer to malt whiskey only?—To all whiskies.

7254. Grain and malt?—Yes.

7255. (*Dr. G. S. Buchanan.*) Do you make a self whiskey at Orkney?—No.

7256. It has never been sold separately?—It has, but not very successfully.

7257. Does it blue with water?—Oh, yes.

7258. Is it a soft water in Orkney?—No, it is a hard water.

7259. The discoloration is with a hard water?—Yes.

7260. Do you happen to know the number of degrees of hardness?—I had an analysis made by Dr. Clark, and one analysis showed 12 degrees and the other showed 18 degrees of hardness.

7261. (*Dr. Horace T. Brown.*) With regard to the age limit you have said that you consider ageing part of the manufacture?—Yes.

7262. That applies also to the manufacture of beer, or wine, or cider?—I have no experience of that.

7263. Would not any regulation of that sort which will be applicable to whiskey be equally applicable to all other beverages?—I have no experience there.

7264. (*Dr. Adeney.*) Your definition of whiskey is a very open one. Do you think the reputation of Scotch whiskey could be entrusted, so to speak, in the hands of grain spirit?—As grain whiskey.

7265. But as Scotch whiskey?—No.

7266. So that you would not consent to call a Scotch patent still spirit Scotch whiskey?—No.

7267. (*Dr. Cushny.*) Would you call it Scotch grain whiskey?—Yes.

7268. (*Dr. Adeney.*) Have you any knowledge of the Irish pot still whiskey?—None whatever.

The witness withdrew.

Mr. J. Scott.

Mr. James Scott, called.

7269. (*Dr. Horace T. Brown.*) Are you the Chairman of the Clydesdale Distillery Company, Limited?—Yes.

7270. Are they pot still malt distillers?—That is so.

7271. You have been also a partner in that firm and in their predecessors James M. Mackenzie and Co., your experience lasting over many years?—Fully forty years.

7272. You have, I believe, a knowledge of the practical working of the malt whiskey distilleries, as well as of the commercial management?—Yes.

7273. How would you define Scotch whiskey?—I would define it as Scotch malt whiskey—all whiskey made from malt only—and I would define Scotch grain whiskey as whiskey made from a mash of cereals containing 30 per cent. of malted barley.

7274. Would you allow any cereals to be used in the mash—any cereals which the distiller might wish to employ?—I should think so—in the mash of grain spirit, but not in malt.

7275. You would not exclude even rice from that mash?—I have no knowledge of what the effect of rice would be.

7276. But you would give a limitation to the employment of malt? You would make it obligatory that the distiller should use not less than a certain amount of malt?—That is, in grain whiskey?

7277. Yes?—30 per cent. was what was agreed upon at a meeting of the East, West and South of Scotland Association.

7278. And that product you would call Scotch grain whiskey?—Yes.

7279. Would you, under any circumstances, allow that to be sold as Scotch whiskey?—Not without a blend of malt whiskey in it.

7280. What is your particular idea with regard to labelling the blends? How are they are to be described—blends of varying amounts of grain and malt whiskey?—You will see from the evidence of the Chief Inspector he gives fourteen different blends, which vary from 85 per cent. of malt and 15 per cent. of grain to 4 per cent. only of malt and 96 per cent. of grain. I therefore would make the suggestion for the protection of the public and of the blender who gives the large proportion of malt whiskey in his blends, that the name should be "A blend of malt and grain whiskey," where the larger proportion was malt; and if the larger proportion was grain whiskey then the name should be "A blend of grain and malt."

7281. Giving the preference to the dominant partner?—That is so. It seems to me a simple way of protecting both the blender and the public.

7282. Where malt whiskey and grain whiskey are blended, you would require that some declaration to the public should be made that they are receiving a blend?—Yes.

7283. How would you deal with the whiskey over the counter in such a case as that?—I suppose they would have to label everything.

7284. Every glass of spirit that a man asks for?—No. He would have to ask for a blended spirit. That is where the difficulty crops up of protecting the consumer who is supplied over the counter, but if there was nothing allowed to be sold except under these descriptions, I think it would meet the case. I forgot to mention that in the description of Scotch whiskey it should be made in Scotland only.

7285. You would not confine him to the pot still?—No; I should allow it to be blended.

7286. Where the blend is only of different malt whiskies, you would call it malt whiskey?—Certainly.

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7287. And where only grain whiskey is used you would have it described as grain whiskey?—Certainly.

7288. Are you in favour of compulsory bonding for any length of time?—No, I think it would be an interference with trade, but if the public should demand it, I should raise no objection, provided that every spirit, home and foreign, was compulsorily bonded for the same period, and that if it was made into law you should allow one year to bring it into force.

7289. (*Dr. Adeney.*) You mean foreign potable spirits?—Yes, such as rum and brandy.

7290. (*Dr. Horace T. Brown.*) What about gin?—Gin would have to be the same.

7291. Are you aware that gin deteriorates by age?—I am not aware that it deteriorates. I understand it does not improve, and that is where the difficulty comes in. I do not propose a limit for bonding.

7292. You think it would interfere too much with trade?—I think so.

7293. You have put in an Appendix to your *précis* referring to the Inland Revenue Warehousing Code, Sections 336 and 337, as to adding colouring matter to spirits for exportation or ships' stores, with the view of suggesting that the Commissioners should recommend that Section 336 of the Code should be altered to limit the quantity of sweetening or colouring matter allowed to be put into whiskey or spirits for exportation and ships' stores as for home consumption, viz., one pint to every 80 gallons—see Section 334—and that Section 337 be deleted. And you say, "This might remove the objections of the United States Customs. This matter was dealt with by the Central Association of Malt Distillers of Scotland on 11th October, 1907"?—I can read you the sections if you wish. I have them here.

7294. What are you proposing to read from?—The Warehousing Code of the Excise and Customs.

7295. Would you read Section 336, which you would like to see altered?—"Colouring matter for spirits. Spirits in a vat may have ordinary colouring matter at the merchant's discretion as to quantity added for exportation only, or it may be added to the spirit when in casks provided that in the latter case such addition be made only"——

7296. You are not quoting exactly from the Code?—Yes, I am.

7297. I have the Code here, and it is worded rather differently. I will read Section 336: "Ordinary colouring matter at the merchant's discretion as to quantity may be added to spirits in a vat when they are intended for exportation only, or it may be added to spirits in casks for exportation, but in this case the addition is to be made only after the delivery account for shipment has been taken and the transaction need not be entered in the accounts." Is that as you have it there?—The wording is a little different, but it is practically the same.

7298. (*Chairman.*) They may be different editions for different years issued at different times?—Yes.

7299. (*Dr. Horace T. Brown.*) Have you a date for your edition?—This book is dated 1907. This is not an official copy, but it is practically the same as you have read except the words are put in a different arrangement.

7300. Would you kindly explain to the Commission in what way you would like to see that section altered?—I would like to see it altered to the same as Section 334 for home consumption.

7301. Section 334 is this: "Colouring matter in a fluid state may be added to British spirits for home consumption in the proportion of one pint to every 80 gallons on the distinct understanding by the proprietor that the addition of colouring matter shall not be a ground for altering the usual allowances, and that it shall not change the denomination of the spirits." Then, as I understand it, the difference is this, that with regard to British spirits for home consumption the amount of colouring is limited?—Yes.

7302. And wth regard to the colouring of spirits for exportation, it is practically unlimited?—That is so.

7303. And you would like to see the same limitation imposed on the exported spirits as there is now on the home spirits?—Yes.

7304. What is the particular reason for that?—That it might remove the objection of the United States Customs.

7305. They are objecting at the present time to the addition of colouring of any kind, are they not?—Yes. I think when Dr. Wiley was over in this country in October, 1907, this matter was brought up before the Central Association of Malt Distillers, but he said there is nothing to prevent them colouring it so that it would be compounded spirit, and apparently his opinion was that if it was limited to the same as for home consumption they would be satisfied.

7306. I believe it is the fact, is it not, that quite recently the landing of certain spirits has been forbidden by the United States simply because they contain a small amount of colouring?—I believe so, but I understand that has been removed.

7307. (*Dr. G. S. Buchanan.*) They were subsequently released?—Yes. This was also brought before you by Mr. Seaman, and it is approved of by our West of Scotland Association.

7308. You make a Lowland malt at your distilleries?—Yes.

7309. Have you sold any of it as a self whiskey?—Yes. I drink nothing else myself but pure Lowland malt whiskey, and have done so for forty years.

7310. Pure?—Yes.

7311. Do you think it improves it to add grain whiskey to it?—No. Certainly not.

7312. (*Dr. Adeney.*) With regard to the blend you refer to as a blend of grain and malt whiskey in which the grain predominates, would you allow it to be described as Scotch whiskey?—Yes, if there is malt in it.

7313. You do not care how little malt so long as there is malt?—I do not see how you could prevent it. I would prefer to have a large percentage of malt if we could.

7314. Would you think it safe to leave the reputation of Scotch whiskey to a blend containing only five per cent. of malt? Would you be satisfied to have a blend containing five per cent. of malt sent to America as Scotch whiskey?—I do not see how you could prevent it.

7315. If you could prevent it would you think it desirable?—Yes, certainly.

7316. (*Chairman.*) Do I understand you to say that you produce nothing but the pure malt whiskey?—Yes, my lord.

7317. Do you object to the blend altogether and object to any grain being mixed with it?—No, not at all. The question was asked whether I thought it improved it. My own personal opinion is that it does not, but to meet the public taste I certainly do not object to blending. In my evidence I have tried to show how you could define certain blends; that is all.

7318. What I understand you to say is, if you were to drink it yourself you prefer the pure malt?—That is it.

7319. But the public have their view, and therefore the blending has gone on increasing?—Yes, and will go on increasing.

The witness withdrew.

Mr. Robert Bertram Gillespie Greig, called.

7320. (*Dr. Adeney.*) You are Vice-Chairman of the Glasgow and West of Scotland Wholesale Wine and Spirit Distillers' Association?—Yes. There are 70 members of that Association in Glasgow—blending firms.

7321. You are managing director of Wright and Greig, Limited, Highland malt distillers and Scotch whiskey blenders, of 64, Waterloo Street, Glasgow?—Yes.

7322. How long have Messrs. Wright and Greig been blenders and bottlers of Scotch whiskey?—Practically 25 or 30 years. The firm was founded in 1868.

7323. And do they do a considerable trade?—Yes, both at home and in export.

7324. What would you define as Scotch whiskey?—Any spirit that is made in Scotland as it is made at the present time; either grain whiskey or malt whiskey I should define as Scotch whiskey.

7325. Do you, as a matter of fact, export grain whiskey as Scotch whiskey?—I do not think we have ever exported any grain whiskey as Scotch whiskey.

7326. Have you a large sale of grain whiskey as Scotch whiskey?—Oh, yes, a considerable amount of grain whiskey in the home trade, not in the export trade.

7327. I mean pure grain, not in the blended condition?—No, not pure grain. It is always blended with a certain proportion, but the proportion varies according to the price that the customer pays for the blend.

7328. But you do not sell, even in your home trade, much pure grain spirit?—No, not much pure grain spirit.

7329. What limit would you give to the product of the patent still if described as whiskey?—I would not give it any limit.

7330. Would you require it to be provided from any materials?—As it is made in Scotland at the present time.

7331. And that is from what materials?—From maize, and barley, and rye, and oats, and wheat—not rice, though I have no reason for particularly objecting to rice further than there seems to be an idea in the trade that spirit made from rice is very fiery.

7332. You would not object if anybody suddenly set up a patent still distillery in your locality and produced a whiskey or spirit from molasses?—Yes, certainly I would. It should only be from cereals, not from molasses.

7333. You do limit it to cereals?—Yes, certainly.

7334. I see from your *précis* of evidence that you would fix the quantity of malt in the mash tun?—That was the resolution come to to safeguard the trade—30 per cent. of malt. They have no objection to making it 35 per cent. or 25 per cent.

7335. You think it is desirable to put some limit?—Yes.

7336. And the 30 per cent. has been decided upon?—Yes, with the consent of the grain distillers.

7337. What is the character of the spirit produced in this way as compared with pot still whiskey?—It is a much more silent whiskey; it is not a whiskey without a flavour. It has a distinct flavour of its own, and any expert blender in Scotland can tell you the difference between the product of two or three different grain distillers. They are not the same; they all have a flavour of their own, and they all mature by age, and they vary in price according to what the blender thinks the value of them is. Some grain whiskies are sold at a penny a gallon less than others.

7338. Is there any distinctive difference between the Scotch grain and the Irish grain spirit?—Not that I know of. I have very little experience of Irish grain personally. We do not use it, and I have never seen samples of it.

7339. Would you think it desirable to give the name of Scotch whiskey to grain spirit?—I see no objection at all.

7340. You do not think it is possible to limit the word "Scotch" to a spirit containing at least some definite proportion of malt?—No, I do not think it is necessary at all.

7341. Are you not in danger of losing the reputation of your Scotch whiskey?—No, we find we are selling more of the better-class Scotch whiskey than we ever did before.

7342. Why?—Because the public is getting educated up to know what a good quality is.

7343. What does the quality depend upon?—It depends upon the blend—what we call a good blend of whiskey.

7344. Does not that depend upon the quality of your grain or your malt?—No, only that you cannot make a good whiskey with an old grain whiskey and a new malt whiskey. You must have them both old.

7345. Taking a good grain, does the quality vary as the proportion of malt varies? Supposing you have a blend of grain and 25 per cent. of malt?—The blend would vary very much. If there was only 25 per cent. of malt it would be different to the blend where you have 50 per cent.

7346. Which would be more valuable?—The one with the 50 per cent. of malt.

7347. So the value of your blend depends more on your pot still?—Certainly.

7348. Are you quite satisfied that the reputation of Scotch whiskey is safe in the hands of grain spirit?—That is rather a difficult question to answer in a way, because we maintain that the quality of the whiskey that is sold at the present time, if the public like to pay the price for it, is perfectly capable of maintaining the reputation of Scotch whiskey.

7349. And that is based on the fact that the pot still is more important?—Yes, not pot still by itself, but as a blend.

7350. By Scotch whiskey you would consider certain distinctive characteristics as to flavour?—Yes.

7351. And aroma?—Yes.

7352. And those are due principally to the pot still?—Yes.

7353. Then as to the question of a minimum time limit for the bonding of new whiskey, what do you think?—The Associations which I represent were of opinion that if it was proved that new whiskey was injurious they would have no objection whatever to an age limit of two years, if it was thought necessary, to protect the cheaper classes of whiskey, or to protect the working man against himself. From my own experience, certain classes of people prefer their whiskey new. They would not thank you for an old whiskey. I have had experience of that.

7354. Have you any knowledge yourself as to the effect upon the system of new as against old whiskey?—No, I am afraid I have never tried either of them in excessive quantity.

7355. At the time of the Islington case your firm had inquiries from customers for pot still whiskey?—Yes.

7356. What was your further experience from those inquiries?—We sent out the pot still whiskey in casks and in bottles, and in a great many cases, after some months, our customers asked us to take back the whiskey, or a proportion of it. They had only sold a very small quantity: it did not suit their customers. That was our own pot still whiskey.

7357. (*Dr. Cushny.*) Was that newer?—No, it averaged seven years old—the blend we sent out.

7358. It was not the newness that the customers complained of?—No, they considered the flavour was too pronounced.

7359. (*Dr. G. S. Buchanan.*) Were you anxious to encourage the trade?—Certainly; we had quite as much profit from the one trade as from the other. Every firm requires a certain proportion of profit in order to carry on their business.

7360. Would the retailers to whom you passed the whiskey on get the same amount of profit?—Exactly the same. We charged them the same price as they were paying for the first whiskey, and they retailed it at the same price.

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7361. (*Dr. Adency.*) Have you any knowledge of the Irish whiskies?—None whatever. We do hardly any trade in Irish whiskey.

7362. In your *précis* of evidence you say that you consider that the large and increased trade during recent years, both at home and abroad, that has taken place is entirely owing to the good blends of malt and grain whiskey?—Yes, that is my opinion.

7363. You limit it to good blends?—Certainly.

7364. What do you regard as bad blends?—I regard as a bad blend a blend of new whiskey. I do not consider new whiskey of any kind, whether all pot still or all patent still, is good personally.

7365. Would you regard a blend of five per cent. of malt and 95 per cent. of grain a bad blend?—No, if it was old—certainly not if it was four or five years old.

7366. Would you expect such a blend to give the full characteristics of Scotch whiskey?—No, not the full characteristics. It would only be a very silent blend.

7367. As a Scotch trader you would not care to put that forward?—No, I would not care to drink it. The competition at the present time is so keen amongst blenders that there is very little of that sort of thing done. The whole thing hinges on a matter of price.

7368. (*Dr. G. S. Buchanan.*) Where is your distillery?—In Morayshire, near Forres.

7369. How long have you had it?—About eight or nine years.

7370. May we have its name?—Dallas Dhu they call it.

7371. It is at work this season?—Yes.

7372. Has it ever put out a self whiskey apart from its efforts to supply after the Islington case?—Yes, before the Islington case we bottled the whiskey and sold it, and we do it at the present time.

7373. You regard it as a good self whiskey?—We do.

7374. Your profit on selling that self whiskey would be less probably than your profit on selling blends, would it not?—Oh no, it is all a matter of age. You may take a blend consisting largely of young grains; it is all a matter of age. We have the same profit from that whiskey sold at seven years of age as we have from selling a blend which we sell at the same price. The only difference is that the blend is 10 years old and the pot still is seven years old. They are both sold at the same price.

7375. To get the pot still at its best you would like it more than seven years old?—It depends on the pot still. Some pot still matures much faster than some other, owing to the character of the water.

7376. Do I understand that your firm's principal dealings are in sending out whiskey already bottled?—Yes.

7377. And in cask?—Both in cask and in bottles.

7378. Do you see any difficulty in making the declaration on the bottles according to whether you supply a grain whiskey or a blend of malt and grain?—There is no difficulty in putting on the blend "This is a blend of malt and grain whiskey," but we should object to state the proportions.

7379. Supposing the suggestion we heard this morning was adopted, and that you differentiated between whiskies containing more than 50 per cent. of malt whiskey on the one side and less than 50 per cent. on the other, would it be a difficult matter for you to classify your whiskies in that way?—Oh, no, it is a very simple matter to state.

7380. You know exactly what it is?—We know exactly what it is, but I do not think it would help the purchaser.

7381. Do you label any of your bottles to the prescription of the person who is going to sell them—the retailer?—You mean to make a blend to suit him.

7382. To put labels on of the kind that he requires you to do or desires you to do?—Yes, occasionally we bottle whiskies with the name of the purchaser, as if it was his own whiskey.

7383. And the description that he would like you to put on of what the blend is called?—Yes.

7384. Do you ever object, or have you had occasion to object, to the kind of description as applied to the kind of whiskey supplied?—No, we never have.

The witness withdrew.

(Adjourned for a short time.)

Mr. R. Brown.

Mr. Robert Brown, called.

7385. (*Dr. G. S. Buchanan.*) You are senior partner of Robert Brown and Company, wholesale whiskey merchants, brokers and blenders, of 45, Washington Street, Glasgow?—That is so.

7386. Your firm is an old established one?—Yes.

7387. Will you tell us what its principal trade consists of?—In blended Scotch whiskey in bulk chiefly in Scotland.

7388. In bulk which you supply to whom?—To retailers.

7389. The retailers being mainly whom—wine merchants?—Wine merchants and publicans.

7390. Do you supply brewery companies at all?—No.

7391. Your trade is chiefly in Scotland?—Yes, chiefly in Scotland.

7392. Is your trade also in bottled whiskey?—No, it is almost entirely in bulk.

7393. You have offered to give us your opinion as to what Scotch whiskey should be, and your experience of it, on your own behalf?—On behalf of the wholesale houses.

7394. Not on behalf of any association?—Yes. On behalf of the wholesale trade in Glasgow, I understand.

7395. You define as Scotch whiskey any spirit manufactured in Scotland, whether in a pot still or a patent still, from barley, whether malted or not, oats, maize, rye and wheat as presently manufactured in Scotland?—Yes.

7396. And you understand that the patent still mash at present contains not less than 30 per cent. of malt?—I believe so.

7397. You take that on information given you?—Solely.

7398. By whom?—By the distillers.

7399. The distillers concerned? There are only two or three grain distillers companies in the whole of Scotland, are there not?—There are three, any way.

7400. Do you deal with all those three firms?—No, I do not think so, we deal with the Distillers Company and the North British Company.

7401. Have both those firms informed you that they use not less than 30 per cent. of malt in the mash?—The Distillers' Company have.

7402. Exclusive of green malt?—I do not know about that.

7403. You consider the spirit produced at present from the patent still mash is entitled to be called Scotch whiskey?—Yes.

7404. Just as much as the spirit produced from a whole malt mash by a pot still is entitled to be so called?—Yes.

7405. At present you make a distinction, do you not?—Yes, at present I call the one grain whiskey, and the other malt whiskey, but if blended I call them blended whiskey, and I hold them all to be Scotch.

7406. You are obliged to as a matter of trade?—Yes.

7407. You have not the faintest doubt whether you are dealing with grain whiskey or malt whiskey?—No.

7408. If you blend them you call them blended whiskey?—Yes.

7409. You hold them all to be Scotch?—Yes.

7410. Inasmuch as you have, for instance, no dealings with patent still distilleries outside Scotland?—That is so.

7411. What information do you pass on to your customers about the whiskies that you send out?—Practically none at all.

7412. You sell to them by price?—By sample and price.

7413. If any customer asks you what he is getting in the way of proportion of malt, you have no hesitation in telling him?—No.

7414. You do tell him?—Yes.

7415. Are you asked?—Yes, we are asked, but very rarely.

7416. If it was a question of describing a blend of a malt and a grain whiskey, putting it into the two categories that have been suggested to us this morning, according to the amount of malt that was contained in them, and the line was drawn at 50 per cent., which was, I think, the figure suggested, you would have no difficulty in invoicing them on one side or the other?—None at all.

7417. You know exactly how much malt whiskey is contained in your blends?—Yes.

7418. Would a declaration to that extent in any sense be giving away trade secrets, or anything of that kind with regard to the composition of your blends?—I do not quite catch the drift of your question.

7419. The suggestion was made to us this morning with regard to the blends of malt and grain whiskey, that if there is more than 50 per cent. of grain in the blend it should be separately distinguished and notified?—I do not agree with that.

7420. My first question was whether there would be any practical difficulty in separating them. You could do it, I take it?—Yes, I suppose we could do it.

7421. You would know what any blend you send out contains?—I know what it contains.

7422. And you would know whether it contained more than 50 per cent. of malt or less?—Yes.

7423. My second question is, what would be your objection to that?—That I do not see any necessity for it. I hold that any blend of grain and malt is blended Scotch whiskey.

7424. Quite so, but would it in any way prejudice you if you let your customers know that they were having in the one case a blend with more than 50 per cent. of malt, and in another case a blend with less than 50 per cent. of malt?—No, I do not think it would prejudice me.

7425. You have some experience, have you not, as to the improvement of grain whiskey with age?—Yes, I have. I think it improves considerably with age.

7426. Another point you wish to tell us is that no generally palatable blend of Scotch whiskey can be produced without a proportion of grain whiskey?—That is my opinion from experience.

7427. And that the proportion of grain whiskey in a blend makes the consumption of heavy full-flavoured malt whiskies possible?—That is my opinion.

7428. Do you think that that is essential on account of there being a number of malt whiskies in the market which are especially heavy and full flavoured?—Yes, there are quite a number of whiskies full flavoured and heavy flavoured.

7429. That is to say, there are some malt whiskies to which a proportion of grain whiskey is more desirable to produce a satisfactory article than others?—That is so.

7430. You do not deny that some excellent whiskies are produced solely by particular distilleries as self whiskies?—No, that is quite true.

7431. Can you tell us anything about the amount of dilution with water that a malt whiskey will stand so as still to give a palatable article?—I do not quite understand what you mean.

7432. Comparing a malt whiskey with a whiskey that consists as regards 70 or 80 per cent. of it of grain, it will stand a great addition of water and still produce a beverage which is tolerable to the palate?—I do not think there is any difference for drinking purposes.

7433. Will you tell us your views regarding an age limit?—Personally I see no necessity for an age limit, but if it were proved to me that it would be to the advantage of the public health that there should be such an age limit, I should be quite willing to acquiesce in it.

7434. You would regard it solely as a question whether the public health was prejudiced or not?—Yes.

7435. You would not take it on the broader basis that an age limit would secure that Scotch whiskey as a whole was a better article?—No, I would not take it on that basis.

7436. You would have no doubt that you would provide a better article?—Personally I would rather drink it with age.

7437. (*Dr Adeney.*) Have you a considerable sale, in proportion to your blend, of pure grain spirit?—No, not now, but we used to have.

7438. The blend is preferred?—Yes, the blend is preferred now.

7439. Can you tell us why you think that is so?—I know it.

7440. But why is it so?—It is that the habit, the custom of the trade, has changed in favour of blends.

7441. The consumer, I suppose, prefers the blend?—Yes. In Scotland, I think, for convenience, the retailer prefers having the work done by a blender, and I think he gets a better whiskey than by blending it himself.

7442. I should like to ask you what are the relative proportions you sell of pure grain spirit and blends?—We sell comparatively little of the pure grain spirit—very little. Lately there has been a slight demand for it, I think, since the Islington case, but I do not know how long that may last.

7443. It is not increasing?—No, I do not think it is increasing, but there always has been in Scotland anyway a demand for grain whiskey as a self whiskey. That is quite an old thing, and it dates back some time.

7444. Have you any knowledge of Irish grain spirit?—No, very little.

7445. Is the flavour distinctly different?—No, I do not think so. I think it is probably a little thinner.

7446. There is no such difference as between the pot still whiskies of the two countries?—No.

7447. I see you are willing to extend the word "Scotch" to any spirit produced in Scotland. That may be safe enough for a trade confined to Scotland, but do you think that would be safe for the English or foreign trade?—Yes, I think so.

7448. What, to your mind, is the value of "Scotch" as applied to whiskey?—I think it is of very great value.

7449. In what does the value consist?—In the reputation of Scotch whiskey.

7450. What is that reputation based upon?—The quality of the whiskey produced—upon its flavour.

7451. One of your answers goes to show that there is not much difference, as far as flavour is concerned, between Irish whiskey and grain spirit?—That is as to grain spirit. I agree that, apart from Irish whiskey being probably thinner, there is not much difference.

7452. So that the real difference as to quality depends upon the malt that is in the blend in the case of the Scotch whiskey?—Yes, the flavour depends upon that portion of the blend.

7453. If you could regard yourself as one interested more in the English and foreign trade than in the Scotch trade would you be content to give the word "Scotch" to grain whiskey?—I would call it Scotch grain whiskey, I think. I am quite prepared to do that.

7454. Do you think that would be fairer than calling it Scotch whiskey?—Yes, I hold it is Scotch whiskey.

7455. I am now talking of the foreigner resident outside Scotland, or take any one resident here in London for instance. Would you think the grain spirit would have that character for flavour which you have in your mind which is peculiar to Scotch

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whiskey?—Yes, I certainly think it would if it is old grain whiskey.

7456. How would the ordinary consumer in London distinguish between an Irish grain spirit and a Scotch grain spirit if there is so little difference in flavour?—I do not think he would.

7457. He would if it were a Scotch blend, or an Irish blend if he had any knowledge of the whiskies of the two countries?—I do not know that the ordinary consumer would.

7458. I am now talking more of the intelligent consumer who would have a knowledge of the distinguishing characteristics?—If he had that he would know the difference between a blended Scotch and a blended Irish whiskey.

7459. So that the value of Scotch is its characteristic flavour?—Yes.

7460. And that flavour is to be derived more from malt than from grain?—Yes.

7461. (*Dr. Cushny.*) Do you not think it is necessary to maintain a certain amount of malt in Scotch whiskey?—I think it is desirable. Do you mean in a Scotch grain whiskey or a blend?

7462. I mean a blend of Scotch whiskey?—Yes, I think so.

7463. What percentage would you suggest?—Personally I would recommend for my own use quite a good proportion of malt whiskey.

7464. Could you give us a figure instead of saying a good proportion?—The difficulty of putting a figure is that you are dealing with different malt whiskies, some of which are very heavy, and could stand a greater admixture of grain, and some of which are Lowland, which would stand very little.

7465. What is the minimum you would suggest?—I think 25 per cent. of malt should be the minimum.

7466. Fifty per cent. has been suggested?—Yes.

7467. Would you object to that? Would you think that an unfair standard?—Yes, I think it would be, and as a matter of fact I object to any standard on principle, either 25 per cent. or 50 per cent.

7468. You must have some standard if you are going to preserve the character of Scotch whiskey?—I quite agree that a blend of Scotch whiskey should contain malt whiskey, but it depends on what you are blending as to what the standard should be. Twenty-five per cent. does not mean very much if you are blending with light malt whiskies, but if you are blending with heavy malt whiskies it is probably more than ample.

The witness withdrew.

Mr. W. C. Teacher.

Mr. William C. Teacher, called.

7469. (*Dr. Cushny.*) You are a Highland malt distiller, and also a wholesale dealer in Scotch whiskey and other blends?—Yes.

7470. Does that mean a blender?—Yes.

7471. Do you consider it is desirable to place restrictions upon the manufacture or sale of Scotch whiskies?—I think it is not.

7472. You do not consider it is desirable to place any restrictions whatever upon the manufacture or sale?—No. As to the manufacture if you deal with patent still whiskey I consider that as presently manufactured it is quite satisfactory, and it is a good wholesome article.

7473. It is simply as to the kind of still that you object to restrictions being put?—I am not a practical distiller, and least of all a grain distiller, so that I should not like to venture an opinion with regard to that. I would just say, as I said before, that as at present manufactured I consider it is quite satisfactory, looked at from the point of view of the consumers or the blenders.

7474. Do you think there is any difference in the wholesomeness or unwholesomeness between the various kinds of Scotch whiskies?—I do not.

7475. How do you account for the view that some hold with one kind and some approve of the other?—I cannot understand it.

7476. Do you find that the taste of individuals varies a great deal in regard to it?—The tastes vary very much. I could give you an example, and I could say a word or two on that point if you desire it.

7477. Yes, we should like to hear it?—The public taste has changed very much during, I might say, the past twenty years. My firm's style has always been a very malty one, but twelve or fifteen years ago we had to introduce lighter and less pronounced whiskies to suit the changing taste. I might also mention that till about twenty years ago a large licence holder in Glasgow whom my firm supplied sold at 4d. a glass, that is half a gill, only pure malt whiskey, but finding the public taste changing, he had 20 per cent of old grain whiskey added, and some years later he increased that to 25 per cent. I just mention that because I think it is an important point. This licence holder was noted for the quality of the article supplied.

7478. Was the profit the same on the two kinds?—Yes, the old grain added would approximately be the same value.

7479. And his price the same?—Yes, the retailing price was the same. This was 2d. per half glass.

7480. (*Dr. G. S. Buchanan.*) And the malt whiskey he used was the same?—Yes.

7481. (*Chairman.*) Was the 25 per cent. of grain whiskey invoiced to him at a higher price?—No, the same price.

7482. I suppose on account of age?—Yes, on account of the age of the whiskey put in.

7483. It was older than the pot whiskey?—Yes.

7484. (*Dr. Adeney.*) Was it dearer?—It would work out just the same.

7485. (*Dr. Cushny.*) Do you think it would be any advantage to the public to state the proportion of malt and grain?—No, I do not think it would be any advantage. I think it would be rather misleading than otherwise.

7486. Do you think it would be an advantage or disadvantage to label whiskey either above or below 50 per cent. of malt?—I do not think it would be any guide to the consumer. He would not be a bit the wiser as to what he was getting.

7487. You suggest then that you should allow whiskies to go out under the same label whether they contain 95 per cent. of malt or 5 per cent. of malt?—Yes. I think the consumer is very safe with the competition there is in Scotch whiskey at the present date. I would not like to put a restriction, but still, at the same time, I do not like to see Scotch whiskey with 5 per cent. of malt being sold to any extent.

7488. (*Dr. Adeney.*) You do not like to see Scotch whiskey with 5 per cent. of malt being sold as whiskey?—No. At the same time there are localities, such as the North of England, where they much prefer it, where the public taste is very strongly in favour of a whiskey with a very large proportion of grain whiskey in it.

7489. (*Dr. Cushny.*) It is not suggested that the sale of whiskey with 95 per cent. of patent should be prohibited at all, but it is merely suggested that it should be separately labelled from a whiskey having not more than 50 per cent. of patent. Would you object to that?—Yes; I do not think there is any need for the restriction. I would object to the labelling.

7490. Do you think it protects the public?—I do not think it is much good. Perhaps, in view of the Islington case, the man in the street might think a little as to what he was getting, and the label might assist him, but I am totally against labelling. I think it would mislead rather than otherwise.

7491. I do not understand how it would mislead?—Well, there could be such a wide difference in value and style between two whiskies with the same proportions. Then, again, the style varies with the age. I think his taste is the only safe guide.

7492. But if you go in and buy a bottle of Scotch whiskey, you cannot taste it first, but you have to buy the bottle and then taste it afterwards. What we want to know is whether the public can be protected from being deceived in this way?—I do not think it would be much guide to him to have it labelled with the proportions. If he did not like that whiskey he would not go back to that public-house, but he would try another one.

7493. (*Dr. G. S. Buchanan.*) How long is he to go on doing that?—He would please himself. The public are very fastidious, as I know from personal experience.

7494. (*Dr. Cushny.*) I suppose you agree with the last witness that the essential quality in Scotch whiskey is the flavour?—That is so.

7495. Do you not think that ought to be protected?—I think it is quite sufficient to leave it to the vendors; it would be sufficiently protected. I am inclined to look on the matter from the point of view of the working man, and I have been rather basing what I have said in respect of him. If you wish to ask my opinion in regard to such as the 3s. 6d. per bottle whiskies, then, perhaps, I should have something different to say, but I have gathered from previous questioning that it was more the working man, the man patronising a public-house, and getting his half-glass of whiskey or glass of whiskey across the counter, that the Commissioners were more thinking of to protect.

7496. I think we are more or less democratic in that way, but do you not think it would be a protection if he could get a good whiskey and could have it certified to have more than 50 per cent. of this necessary constituent?—It would require to be very new to put it in at the price.

7497. Your objection would be against the new whiskey?—Yes. There are some people sell at 5d. per gill, or 2½d. per glass.

7498. What have you to say in regard to insisting upon the ageing of whiskey?—I do not think it would be good to put any restriction upon it. There would be loss of strength and bulk. There would be the interest and rent charges, which would increase the cost, and to meet this the strength would be lowered, and the consumer would not get as large a drink for his money, that is, it would not stand as much water.

7499. Would the quality be improved by ageing?—It is a matter of opinion entirely

7500. You do not believe new whiskey is injurious?—I do not, but still I might say it is my opinion that where a person is accustomed to drink new whiskey he will not get the same satisfaction from drinking old. On the other hand, a person accustomed to drink old whiskey may find new whiskey disagree with him. I think it is a great deal to do with what a person is used to.

7501. Would compulsory ageing give an unfair advantage to English gin, do you think?—I think it would. I think Scotch whiskey has during the last few years, possibly 20 years, displaced gin to a very great extent, and I would be rather afraid it would let gin come in again if the one spirit were restricted and the other not. Of course, as a previous witness indicated, a differentiating duty might be put upon gin.

7502. You think that gin would be sold cheaper, and that that would influence the public?—It would be able to be purchased by the retailer at a cheaper price, and would therefore militate against Scotch whiskey.

7503. It would not be sold cheaper to the customer over the counter?—It might, but it would depend on what the restrictions were on the Scotch whiskey.

7504. You do not think that a two-year-old Scotch whiskey could be sold at the same price as gin?—I think not.

7505. (*Dr. G. S. Buchanan.*) Where is your Highland malt distillery?—It is in West Aberdeenshire, at Kennethmont, south of Huntly.

7506. Is it still at work?—Yes.

7507. When was it established?—In 1898.

7508. You told us about the public taste in the North of England for a whiskey with a large proportion of grain?—Yes.

7509. That is in a colliery district?—Yes, in Manchester and Newcastle, etc.

7510. You are thinking of Tyneside, are you not?—Yes, round about Newcastle and in the Manchester district. I am referring mainly to the cheaper classes, more to the bar trade, although a great portion of the better class whiskey of the bar trade, say 8d. or 10d. a gill, is also of a light character. The Manchester people do not care for the heavy style.

7511. You say Manchester?—Yes, and Newcastle too.

7512. Can you say whether the sale of that whiskey to colliers in the Tyneside is specially associated with the custom of the tied houses thereabouts?—I think so. I am not so conversant with the Tyneside.

7513. With regard to the describing of whiskey on labels I would like to know your own experience. Have you any difficulty in distinguishing, we will say, between a Highland malt whiskey, that is a self whiskey, and Islay whiskey, and a blend like, say, Dewar's, and Cambus? If you had those four samples would you have any hesitation in saying what type they belonged to generally?—No, none.

7514. You would not be able definitely to say: "This is," we will say, "Dewar's whiskey," as against some of the other blends that you know of, but you would know pretty well where you stood, would you not? You would know the general type of whiskey?—Yes, I have picked out Dewar's quite readily amongst some of the other proprietary brands. I consider it of a lighter style than the others.

7515. You have special experience in these things, but even a person with less experience would be able to distinguish between the types that I have spoken of, that is to say, a whiskey drinker, a man who is used to whiskey?—Yes.

7516. Do you see any difficulty in passing to that extent information as to the general type of the whiskey concerned on to the public by a label? For example, one is a Highland malt, the other is an Islay whiskey, the other is a blend, and the fourth Cambus whiskey?—So far as the proprietary whiskies are concerned you could not very well distinguish between, say, Dewar's and Johnnie Walker's.

7517. You could not?—No, not on the label so far as stating the proportions. I do not think it would be fair at all for one thing.

7518. I do not mean to say the exact proportions, but I was taking your proposition that it would be of no advantage to the public to give any sort of information or statement on the label. I mentioned Dewar's as an example of a blend with a considerable quantity of malt, and a material quantity of grain. Take that on one side, and on the other hand compare with that a Highland malt whiskey, a self whiskey, or an Islay whiskey, and a Cambus. Those are the four general types taken haphazard. There would be a distinct amount of information to the customer, would there not?—Yes, there would as between what we call a self whiskey and a blended whiskey.

7519. Now I want to put to you one point with regard to the statement in your *précis* that the average age of Scotch whiskey is greatly increasing, and that you give as a reason for taking no administrative action. Is there not likely always to be a demand for the cheapest whiskey that can be supplied?—Yes, I might mention that in the Scotch mining districts the miners would not thank you for an old whiskey. They must have something——

7520. Something with a bite in it?—Yes, with a bite.

7521. I may take it the gist of your evidence, if I may summarise it, is that the public are to take all Scotch whiskey on trust without any means of control over the statement of the blender?—I think they might safely do so. I think that is as regards Scotch whiskey. As regards any spirit used as Scotch whiskey otherwise I have a different opinion.

7522. (*Dr. Adeney.*) I take it from your evidence that you have it in your mind chiefly to produce a cheap whiskey for the labouring man?—Yes. They require it.

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7523. They require it naturally, and it is a perfectly legitimate thing to try and supply him. In supplying that cheap whiskey you have had to use a very considerable quantity of grain spirit, have you not?—That is so, but it depends greatly on the district.

7524. Do you supply a wholly grain spirit to these districts, or any of them?—There are some.

7525. Are there many?—No, it is very little.

7526. The great proportion prefer a blend?—Yes.

7527. I take it you would not regard that as a characteristic type of Scotch whiskey?—I look on grain whiskey as Scotch whiskey—one of the various types.

7528. What distinction would it have from an Irish grain whiskey?—There is a certain distinction. I am not very thoroughly up in Irish whiskies, but so far as I have seen Irish grain it has a slight characteristic of its own.

7529. Very slight, is it not? We have had it from other witnesses that it is so?—Yes, it is comparatively slight.

7530. You have spoken of the protection of the consumer. Do you not think legitimate trade requires protection?—I think there is too much of that altogether nowadays.

7531. That may be, but would you put that under the heading of legitimate trading? Do you not think that legitimate trading requires protection much in the same way as a consumer requires protection? I have in my mind that it is evident from the evidence that has been given to us that there is some value in the term "Scotch" as applied to whiskey?—Yes.

7532. Is not the trade wise in seeking to uphold that value?—Yes, undoubtedly there is goodwill in the name "Scotch Whiskey."

7533. Would that goodwill be upheld by this cheap blend that you refer to?—No, the very cheap whiskies do not redound to the credit of Scotch whiskey.

7534. Is it fair to call them Scotch whiskey?—You must supply the demand.

7535. But is it quite necessary to use the same terms? For instance, if we agree to regard this blend as whiskey or as Scotch grain whiskey, or as a blend of Scotch grain whiskey, would not that be a fair description?—I do not think it would be a good thing to draw a hard and fast line.

7536. On whose behalf do you say that?—On anybody's behalf. I might say that I take into account self-interest. Undoubtedly I go for upholding Scotch whiskey, and undoubtedly Scotch whiskey will spread if there is a certain proportion, or a fair proportion of malt in the whiskey.

7537. Would not that also amount to this, that in order to call a blend a Scotch whiskey there should be some minimum proportion of malt in it?—I think it might quite well be left to the consumer to demand what he cares about.

7538. Of course, you know more about the trade than I do as a citizen?—If it is the foreign trade, then we are better able to educate the foreigner than they to educate us as to the particular style, but I think it is well known that abroad they prefer a more silent style, at least, that is our experience, and I understand it is the experience of others.

7539. It has been given us in evidence here that it is considered in America that they can make patent still grain spirit for themselves, but not Scotch pot still or Irish pot still?—I believe that is so.

7540. Would that affect your opinion at all?—I certainly would object to Scotch malt whiskey being blended with the rye whiskey and sold as Scotch whiskey.

7541. Yes, but what appears to me is that there is a certain amount of ignorance on the part of the consumer largely in this spirit trade, and it occurs to me is it safe for a gigantic trade to trust in the ignorance of their customers; that is really putting it bluntly, but that is what it comes to, is it not?—Yes. So far as the trade in Glasgow is concerned, unless you give a good article you do not do a good trade.

7542. Are you blenders yourselves?—Yes, we are blenders. It is our principal business.

7543. What is the minimum age of the spirits that you blend?—I have really not gone into that.

7544. You can give us no general idea?—Possibly five years.

7545. Is that the minimum age?—The average age.

7546. Does that refer to the grain spirit as well as to the pot still spirit?—Yes, I think that might cover both. In the Glasgow trade, of course, the more malty the whiskey you give the less age you can give, at least, the age has to be kept down so as to meet the price.

7547. Do you agree with the witness who expressed the opinion this morning that so far as the pot still process is concerned age is a part of that process?—I have heard it put that way before, and you might apply it perhaps to port wine. I do not know that there is much port wine, or any, that is sold new. If you apply it in that way as part of the process you might apply it to whiskey in the same way.

7548. It is truer of the pot still than of the patent still, is it not?—No, I do not think so, not as potable spirits. I hold that grain whiskey requires ageing just as malt whiskey does, but not to anything like the same extent.

7549. I do not know that it would be fair to ask you, therefore do not answer this question if you would prefer not. Would you care to tell us the minimum proportion of malt that you use in your blend?—The smallest proportion of malt my firm used in any of our blends is one-tenth part of malt. The quantity sold is so small, it is hardly worth mentioning. It is a very small proportion, and we would rather not sell it, really.

7550. Not as Scotch whiskey?—Not as Scotch whiskey.

7551. (*Chairman.*) That goes down in England?—Yes, it suits the taste here.

7552. (*Mr. J. Y. Buchanan.*) Is there much difference in the taste of the different districts of Glasgow? It is a very big city?—Yes, it is a big city, but I think that is too fine a distinction.

7553. You do not notice any well-marked difference in the kind of whiskey you have to supply to one part of the City down by the river, and the other part up by the manufactories?—There is only a class distinction, such as that by the theatres, where you must give an older and more matured class altogether.

7554. Do they drink pure patent still whiskey now in Glasgow?—Yes, I think there is a good proportion. It is really small taken altogether, but there are people who make a speciality of pure grain whiskey, particularly Cambus and Cameron Bridge.

7555. We had it from one witness at the beginning, I think, that they trace the taste for patent still whiskey, to the more sedentary occupations, such as shoemakers and tailors. Those people prefer it. Have you noticed that?—Yes, and clerks. There is no doubt that a malt whiskey is more difficult to digest. I am not a whiskey drinker nowadays myself, but a number of years ago, for dietetic purposes, I tried the three different kinds, pure malt, blended, and pure grain whiskey, giving a breathing space between each—I mean over a matter of a year. I am not dealing with hours, or even days. There is no doubt about it in my mind that the grain whiskey did less harm. I cannot digest spirit in any shape or form, but undoubtedly the pure malt was the greatest killer, as I might put it. I took longer to recover from the effects.

7556. Would you, in the matter of definition of whiskey, seeing that your experience is that the grain whiskey is the least hurtful, approve a definition which excluded pure grain whiskey from the definition of Scotch whiskey?—No, I would not exclude grain whiskey.

7557. Then any definition that is made must cover grain whiskey under the denomination, legally, if we are going to make a legal definition?—You do not mean to exclude whiskey altogether, do you? I am afraid I am not following you.

7558. My idea is this, if we are to have a definition we must know what is to come into it, and if there is to be a certain proportion, some have suggested 50 per cent., of malt, that excludes grain whiskey?—Yes.

7559. From your statement it now appears that grain whiskey from the interest of the consumer should not be excluded, and therefore you would not make, would you, a proportion of malt, whatever it may be, a *sine quâ non* in the definition of Scotch whiskey?—No, because there are districts as well as those in

Glasgow where they prefer grain whiskey pure and simple. I do not think it would be fair to that section of consumers.

7560. (*Dr. Adeney.*) Would you consent to that being called Scotch grain whiskey?—I do not think there would be any harm.

7561. It might be a protection to the word "Scotch," might it not—I mean a legitimate protection?—No, I do not think so. I hold that grain whiskey is Scotch whiskey.

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7562. Those coming from Ireland might hold that it was Irish whiskey?—They might.

The witness withdrew.

Mr. James Mackinlay, called.

Mr. J. Mackinlay.

7563. (*Mr. J. Y. Buchanan.*) You are senior member of the firm of Charles Mackinlay and Co., distillers and wholesale whiskey blenders, of 87, Constitution Street, Leith?—Yes.

7564. Is your distillery in Leith?—No, it is in Inverness.

7565. You have been head of that firm since 1867?—Yes, I have.

7566. Therefore, you have had long experience?—Yes.

7567. You are also Honorary Secretary of the Edinburgh and Leith Wholesale Wine and Spirit Dealers' Association, which numbers 70 or 80 members, representing nearly £4,000,000 of capital invested in the whiskey trade?—Yes.

7568. The Association consists entirely of dealers and blenders?—Yes.

7569. And not distillers?—No, not distillers.

7570. Do you do a large trade with England?—Yes, a considerable trade.

7571. And a foreign trade?—Yes.

7572. And your firm also exports largely to India?—Yes, we have a trade with India.

7573. Is that in cask or in bottle?—Both.

7574. Do you also export to other parts of the world?—Yes.

7575. Have you special labels or marks for your own whiskies?—Yes, our own marks and labels.

7576. What is your opinion as to what should be called "Scotch Whiskey"?—I hold, as I have said in my *précis*, that both pot and patent still made from cereals should be called "Scotch Whiskey" if made in Scotland and containing, as I understand they do, 25 to 30 per cent. of malt. I think they should be called "Scotch Whiskey." We always have called patent still whiskey grain whiskey and invoiced it and sold it as grain whiskey for all these years.

7577. As Scotch grain spirit?—Yes, and very often by the name of the distillery. We always sell it wholesale, such as Cameron Bridge or Caledonian or whatever the distillery is.

7578. (*Dr. Adeney.*) Those are not grain distilleries?—Yes, Cameron Bridge and Caledonian are grain distilleries—part of the Distillers' Company.

7579. (*Mr. J. Y. Buchanan.*) Would you not call anything Scotch whiskey that did not contain 25 to 30 per cent. of malt?—That is another thing. I was talking of grain whiskey containing 25 per cent. to 30 per cent. of malt in the distillation.

7580. Would you at that rate make the definition depend upon the malt in the mash?—I am not a distiller of grain, but I understand that it contains 25 per cent. to 30 per cent. of malt.

7581. What is your opinion of grain whiskey and its improving or not improving by age?—It certainly improves by age, I think.

7582. How long do you think that goes on?—It does not take so long in grain as it does in malt.

7583. As to the age at which you consider a whiskey matured what would be the relative ages you would put for grain and malt?—I should say that grain whiskey from four to five years old is at about its best, and it goes on improving even after that.

7584. What would be the corresponding age for malt?—I think malt might be put at six to eight years old. It depends on the distillery. Some take longer to mature than others.

7585. I meant only generally. Have you been in the habit at any time in your experience of invoicing your whiskey as "Aqua"?—Yes, we have invoiced a good deal in that way.

7586. Has that gone out now?—Yes, I think so, but some do, I think, continue it. I have seen a great many invoices of all ages. I have seen some of 1834, some of 1850, and some later, where they use the word "Aqua," both to malt and grain.

7587. You quote here a book called "The Hotel, Innkeeper, Vintner, and Spirit Dealers Assistant," published in 1825. Can you give us a little account of that? What was the general gist of it?—It shows that blending or mixing is a very old affair. That book is dated 1825.

7588. Did they have anything then that corresponded to the patent still whiskey? Of course, they had not Coffey's still, but had they anything that you would say was the same style as the modern patent still?—I cannot go as far back as that. I think the grain whiskey at that time was simply made through a pot still.

7589. If there was any blending, of course that would be blending in the same kind of way as now—of a light whiskey with a heavy whiskey?—Yes.

7590. Have you any idea of how they produced the heavy and the light whiskies in those days, when they had no patent still to work with?—I do not think it was the same thing in malts because the malts vary very much. It is the water at the different distilleries which causes the variation; some are heavy and some are light.

7591. Are there malt whiskies that can be used now really much the same as patent still whiskey for blending to give lightness?—You mean at the same age?

7592. Yes?—Yes, I think some of them might be used at five or six years old.

7593. They are so light as that?—Yes.

7594. I suppose in this book the author did not suggest that you should put any essences?—No.

7595. It was entirely straightforward whiskey?—Yes.

7596. I suppose that has not crept in at any time?—No, I have never heard of such a thing.

7597. You are not offered by travellers Scotch whiskey essence?—No, I never heard of that.

7598. You can give us some very interesting recollections about the commencement of the sale of Scotch whiskey in London and in England? When did that come in? It was quite unusual, I should think, in the year 1860, was it not?—I think it was just about the time the duties were equalised, or a little after that.

7599. Whiskey coming from Scotland to England was a matter of change of taste, was it not, or medical opinion?—I think when the duties were equalised the Irish whiskey predominated. They made in larger stills, the whiskey was more uniform in style, and you could have a larger quantity of it. If anyone saw Irish once they would know it again. From what I have seen of it it had a peculiar flavour, which is peculiar to all Irish whiskies, and they were in that way able to do a fairly large trade in a uniform quality. With Scotch whiskey it was different. One man would bring to England north country whiskey, another Islay, a third, perhaps, plain malt or grain, all different in style. It was then that the Scotch blenders saw that blending was a necessity; they began to blend these various malts and the addition of grain

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was also necessary, because blenders could not get the quantity for one thing and they could not get the smoothness and uniform quality without using grain. I remember the time when three hogsheads of Irish to one of Scotch were sold in London, but a short time afterwards these fine blends of Scotch came in, and the taste changed altogether, and it became the other way round. That is within my recollection.

7600. Now as to whiskey that goes abroad, say to the Continent. How long has that been and is there much trade in that?—I do not think it is very old in the matter of the Continent. Of course, it is very difficult to get French people to drink whiskey, but they have picked up the habit a little when here, and a certain trade is done. Then there are always our people travelling abroad and they want it. I think trade in whiskey on the Continent has been stimulated by the vines being destroyed by the phylloxera, which was in 1875.

7601. Is that entirely bottled whiskey that goes abroad?—Yes, generally it is bottled whiskey that goes to the Continent with the label of the proprietary brand.

7602. You have different kinds of blends for different classes of trade. In better class bars it is different. Is that more pot?—Proprietary brands, good blends, do contain a large proportion of malt It varies.

7603. The blending of Scotch whiskies is a matter of education?—Yes, very much.

7604. You require people with very fine taste?—Yes, good taste.

7605. From one year to another that requires to be checked. You cannot depend on the whiskey that you have used this year for producing a certain effect next year?—No, you require to examine all the samples you put in your vat, and besides, you also have the chance of contamination from your wood. You have to take a sample from every cask.

7606. You say that foreign spirits are not allowed to be blended in bond along with home-made spirits for home consumption, and that you would like to see the Board's Order forbidding this extended to whiskey for export?—Yes, I think it would be a very good thing. There is an order of that kind for home consumption.

7607. You say that flavouring essences were mixed with patent still whiskey in order to produce spurious whiskey?—Someone gave that in evidence, but I have not heard of it.

7608. You have not?—No, never.

7609. What is your opinion about an age limit?—I think it might be a little hardship to the trade. There is a large quantity of very cheap stuff sold, and I must say that it is neither a profit to the dealers who sell it nor is it a credit to Scotch whiskey, but it is very difficult to stop it.

7610. I suppose it can be sold cheap enough to meet a very large demand?—They buy the cheap stuff, of course.

7611. Because they cannot afford the dearer?—Yes, because they cannot afford to give a great price. With regard to an age limit, it would require to be applied to all spirits. My difficulty would be with regard to gin, because we could not allow gin to come in and compete with Scotch whiskey because it possibly would cut us out. The putting of two years upon grain whiskey would add sixpence per gallon to the cost, and that would allow gin to come in much cheaper unless you could tax gin.

7612. Do you think there is much danger of people taking to gin again?—I think there would be, because of the question of price. Nowadays there is a rage for cheapness in all things.

7613. Gin is a rectified spirit?—Yes, quite new spirit.

7614. And it is turned out ready for drinking?—Yes, they say it does not improve by keeping. We have had Commissions sitting on whiskey in my time twice—in 1891 and on a previous occasion, and I understand the difficulty always was with regard to an age limit as to gin; the opposition was so great. It would doubtless be a good thing, and it would mean that grain would not be sold under two years old. It is better two years old than new.

7615. (*Dr. Adeney.*) Why do you say it is better two years old?—Because you get rid of all the still gases. I have heard them spoken of as ether, but what that is I cannot say, as I am not a chemist.

7616. Is that common with patent still products?—No, but generally speaking, a new whiskey has a slight still flavour, which is got rid of by a little age.

7617. (*Mr. J. Y. Buchanan.*) What is your opinion about chemical standards?—I do not think much of them at all.

7618. Do you think if you gave a number of samples to a chemist he could give you a specification of them?—My experience is that analysts do not give the same results, and besides, in brandy it has not done any good. I think it has done a great deal of harm, because the French shippers are able to produce all the ethers required and sell the brandy cheaper than they did before.

7619. With regard to a standard quantity of patent and pot still being required to constitute a blend you are opposed to that?—Yes, I think it is a restriction, which is unnecessary.

7620. You would advise that the term Scotch whiskey should be applicable to pure spirit or to any mixture of that so long as they are made in Scotland?—I think so.

7621. You would, however, limit what it is distilled from?—Yes, I have said from cereals.

7622. That would be really the differentia that would characterise Scotch whiskey?—Yes.

7623. You also object to whiskies being required to be labelled so as to give any indication of the component parts of the blend?—Yes.

7624. Is that because it is unnecessary or because it is unfair?—I think it is misleading to the public, and hardly fair to the blender, and I do not think it is any indication of the quality.

7625. Would it really give the blender away very much if all that has been proposed were put upon the label; it is not much after all?—There is no indication of quality, but I think it would prejudice whiskey in the eyes of the public.

7626. I suppose a blender, in order to give the public the same style of whiskey, and to keep it uniform, is obliged to alter his style of blending because the whiskies alter?—Yes.

7627. So that to be quite conscientious about it he would have to alter the specification on his label?—Yes.

7628. And the public would be apt to think he had altered the whiskey?—Yes.

7629. So that it might mislead the public?—That is what I am afraid of. I would like to see the quality of Scotch whiskey kept up in every way. I think the less restriction the better.

7630. (*Dr. Adeney.*) I have some questions to put to you on behalf of Mr. Guillemard. How would you insure that spirits sold to the consumer as Scotch were actually made in Scotland?—I think if the dealer sold them and invoiced them as Scotch, that would be sufficient. I think if it were understood that only whiskey made in Scotland was to be sold as Scotch, the dealer would be careful to use only Scotch whiskey, and besides, in blending in bond that would be checked by the Excise or by the Customs.

7631. Those are the only checks you can suggest?—Yes, the Excise officer would not allow blending of other than Scotch any more than he would allow foreign spirit.

7632. There is no test such as taste, or anything of that kind?—Taste would be a different thing. Do you mean the taste of the consumer?

7633. The characteristic taste which you refer to as being the Scotch taste?—Yes, exactly. It has a characteristic.

7634. Supposing you bought a bottle in England as Scotch whiskey?—I would know at once. If it were pure grain I might be deceived by that. I do not think I could perhaps tell the pure grain from perhaps a very clean English grain. I might not.

7635. You might be given an Irish or an English grain?—Yes, it might be so very silent.

7636. It might be so very silent that you might regard it as Scotch?—Yes. I might think it was very poor Scotch whiskey, but I might not be able to swear that it was not made in Scotland.

7637. Would it be possible to discriminate between spirits made in a patent still in, say, England, from spirits made from the same materials in a patent still in Scotland or Ireland?—I have not really tasted these very much. I never bought Irish grain myself, or English grain either.

7638. You would not expect to?—I think if I saw them together very often I might be able to distinguish them, but I would not like to undertake that I could. If made from molasses, or anything of that sort, I might be able to tell pretty well, but grain whiskies have not as much character as malt whiskies, not so distinct a character.

7639. If spirits made from cereals in a patent still in Scotland may be called whiskey, could reasonable objections be taken to spirits made similarly in England being so termed, and being sold as such or even used for blending with Scotch or Irish spirit and sold as whiskey?—I do not want to monopolise the word whiskey, but I should certainly, as I have said, apply the name Scotch whiskey to everything made in Scotland.

7640. This is a question asked as to whiskey?—I do not think whiskey should be blended with English spirit.

7641. Mr. Guillemard's question is, could it be sold as whiskey?—No, I think not.

7642. You quite understand the question?—Yes; I think whiskey is a Scotch word.

7643. What do you say as to Ireland?—There is Irish whiskey too, that is pure Irish—that is another thing.

7644. From the book quoted by you it would appear that at the time it was written whiskey was made from molasses and sugar, as well as from grain. In the light of that statement do you see any objection to spirit made from molasses being now considered as whiskey?—Certainly; I think in that old book things were different altogether.

7645. You think the whole custom has changed?—I think so. I have never seen molasses spirit to my knowledge.

7646. And you think custom ought to dominate the present position at any rate?—I do not quite follow you there.

7647. Molasses was used?—It is in that old book which I simply quoted to show that blending was common in those days. I did not mean to quote all that they said about the various classes of spirit that were sold or made at that time. I think all the whiskey taken together at that date was very inferior; there was not much good whiskey made.

7648. Does not everything go to show that the word "whiskey" was in times gone by applied generally to all spirit made in Scotland irrespective of the materials used in the manufacture?—Are you quoting from the book?

7649. That is referring to that book?—Yes.

7650. This is Mr. Guillemard's question that I am putting. You remark in your *précis* on the blending of foreign spirits with home-made whiskies for exportation?—Yes.

7651. You do not seem to be aware that if this is done the spirits under the Revenue Regulations cannot be described as other than what they really are, namely, a mixture of foreign and British spirits?—Yes.

7652. They cannot be described as spirits of exclusively British origin, and therefore could not be exported as whiskey?—They are exported in some way or other and sold at a very low price.

7653. But not as whiskey?—I do not know what they call them. I do not think they care very much about the description.

7654. According to this they are exported with full knowledge of their composition?—Very likely. I do not think the Customs or the Excise take any note of what goes out of the warehouse just now.

7655. It is suggested by this question that these mixed spirits cannot be exported as whiskey under the Revenue Regulations?—I should like to see the rule as to blending in bond for home consumption extended to export.

7656. As to a time limit, how would you deal with rectifiers, compounders, and manufacturing chemists who require spirit at a very high strength, and for whom a matured spirit is not necessary?—That was one of my difficulties about making a time limit.

7657. Now there are one or two questions that I would like to put to you myself. I am anxious to get a clear idea as to what the term Scotch whiskey should be applied to. I see you have a trade with the Colonies and India?—Yes.

7658. If you receive orders from any colony or from India for Scotch whiskey what would you supply?—I would supply something that had a fair proportion of malt in it. If it is under my brand it would have a fair proportion of malt.

7659. You say a fair proportion of malt, but could you give us a figure?—I think anything from 30 to 60, or 70 per cent. these blends contain.

7660. You regard that as a blend safely carrying the characteristics of Scotch whiskey?—Yes.

7661. But you would limit it to 30 per cent. of malt?—I do not say limit it. I do not approve of a limit at all. I say that as to blends that we care to export.

7662. As Scotch whiskey?—Yes, as Scotch whiskey. They certainly do contain 30 to 60 or 70 per cent. of malt, or even more.

7663. You would not unasked export grain spirit as Scotch whiskey?—No, I should not do so.

7664. Would you unasked sell grain spirit as Scotch whiskey?—No, not unasked. If they asked me for a very cheap whiskey it might be shipped, but I have never done it.

7665. Do you not think there is some necessity, on the point of consideration for the value of the word "Scotch," for making some distinction between the patent still and blends?—Personally I would have no objection if the thing could be done without imposing further restrictions on the trade, because I think we are pretty well hampered as it is.

7666. I quite sympathise with you. It is in the interests of legitimate trade that I am putting these questions?—Exactly; and for the credit of Scotch whiskey I should like to see the quality kept as good as possible.

7667. Upon the continuation of the prestige of the spirit depends the continuation of the trade?—Exactly.

7668. Would you mind telling me the minimum age of your pot still whiskies in your blends?—The minimum, I should say, is about six to eight years old. I should think it is about seven or eight years old.

7669. That is the minimum?—Yes, for what you call proprietary whiskies.

7670. What does that run down to?—I do not know that there is any malt used under five years old.

7671. And what do you say as to the patent still?—That is about three years old; from three to four years.

7672. Not under that?—As to these cheap whiskies that are asked for, they are very new.

7673. They must necessarily be new?—They must be new at the price they are asked for. I am talking of blends that you put your brand on.

7674. Have you any knowledge of the Irish whiskey trade?—I have no knowledge whatever of Irish whiskey, except that I have tasted it, and I know that it has a peculiar taste that you cannot mistake; it is quite characteristic, and you cannot mistake it.

7675. You could not tell me whether the practice as to Irish blending synchronised with the practice of Scotch blending?—I could not say.

7676. Of course you know Irish blends have been put upon the English market?—Yes.

7677. So that you cannot say that it is the Scotch blends that have driven the old Irish pot stills out of the English trade?—I think at the time that I speak

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of, in the sixties, that the Irish were then sending over their pot still whiskies.

7678. Only?—I think so.

7679. You are not sure?—I am not sure. I could not swear to it. I think blending has come much later.

7680. You say in your proof that you are aware that a great quantity of cheaper blends are sent out to suit a certain class of dealers—not consumers, but dealers?—Dealers buy it who want to pay as little as possible.

7681. Who, owing to competition and increasing burdens on the trade, are forced to buy cheaper qualities of whiskey?—Yes.

7682. What is the nature of these cheaper qualities of whiskies—is it almost wholly patent still?—Yes, with a certain proportion of good Scotch grain; as far as I am concerned, with a certain proportion of malt.

7683. I take it, from your former answer, you prefer the name of Scotch grain whiskey to Scotch whiskey, or Scotch blended whiskey?—Blended whiskey I would apply to the higher quality.

7684. Have you any distinction between these cheaper qualities of whiskey and your higher grades of blend?—Not much. I distinguish them by a mark. Labelling does not come in in these cases because the whiskies are not generally sold in bottles.

7685. So that the unfortunate consumer simply asks for Scotch whiskey?—They are not injurious—they are not bad to take. These low-class whiskies are not very nice, but I think the class of people who drink them do not care for a high-class whiskey.

7686. (*Dr. Horace T. Brown.*) I think you can give us some very interesting quotations from an old book of 1825 by Alexander Peddie called "The Hotel, Innkeeper, Vintner and Spirit Dealers' Assistant"?—Yes. I quote the following extracts from that book: The title page is "The Hotel, Innkeeper, Vintner and Spirit Dealers' Assistant, containing a great variety of the most approved recipes for the making, mixing, managing, flavouring, colouring and bottling of Wines, Foreign and British Sprits, Porter and Ales. Adapted to every branch of the Wine, Porter, Ale and Spirit Trade. By Alexander Peddie, Author of 'The Cotton and Linen Weaver's Assistant,' 'Practical Measurer,' &c., Glasgow. Published by Khull, Blackie & Co., and Archibald Fullarton & Co., Edinburgh, 1825." Then the preface is dated Perth, 1st July, 1823. Then on page 275 it says: "Whiskey, usque, or as it is expressed in Gælic, usquebaugh, is a well-known drink in Scotland and Ireland; it is principally extracted from malt, but the spirit extracted from molasses, sugar, &c., is also in Scotland and Ireland called whiskey; it is much used in the adulteration of foreign spirits, making of compounds, cordials, &c." Then on page 277: "Whiskey from malt, when distilled by a slow fire, is a most agreeable vinous liquor; and when running off, the low wines, or, as it is sometimes termed, doubling, if roots, seeds, berries, aromatics, plants, moss, peat, &c., to be thrown in or suspended into the still, they will impart to the spirit a portion of their flavour; and if as much attention were paid to the improvement of the liquor by the distillers as might be, there would be a greater variety of flavours to Scotch and Irish whiskey. I am of opinion that good whiskey extracted from malt is the most safe dram, if taken in moderation, and not so pernicious and hurtful to the constitution as any foreign liquor; but if taken immoderately, it must have the same pernicious effects. Whiskey, on account of its being drunk in a clear state, is not so easily adulterated as as rum or brandy; although, no doubt, it is susceptible of some degree of sophistication. Whiskey extracted from malt does not answer the purpose of making up compounds, cordials, and imitating foreign liquors so well as that extracted from sugar, molasses, raisins and cyder, as it has a particular flavour of its own, which nothing will overcome but a superabundance of the tincture of seeds, herbs, roots, spices, &c., that may be infused into it, which superabundance would make the flavour of the ingredients too strong, and, of course, disagreeable and harsh; whereas, if sugar, molass, raisin or cyder spirit, termed silent whiskey or whiskey without any particular of its own, were used, the flavour of the ingredients could be regulated according to taste without any difficulty." Page 280: "Whiskey may be mixed up in such a way as to be of considerable advantage to the seller, and be equally as good, agreeable, and palatable to the buyer. But when whiskey is to be mixed to sell at any certain price, the quantity of the two different liquors would need to be carefully studied. It would not do to mix up whiskey, if the two kinds to be mixed were of a bad quality, as two bads will never make a good; also the proportion of both would need to be studied; for example, if good malt whiskey and inferior grain whiskey were to be mixed together, so that it might be sold at a certain price, it would need to be considered whether the malt whiskey would stand two-thirds or equal quantities, one-third, one to four, one to five, or one to six, &c., of grain whiskey, without spoiling the effect and flavour which the malt whiskey is intended to produce upon that extracted from raw unmalted grain," and so on. The author, Mr. Peddie, gives seven or eight examples, or what he calls recipes, of mixing malt and grain whiskies at pages 285 to 289; some with the malt in greater quantity (286-8 and 290); others with grain in greater quantity (285-8); and also examples where they are equal (286-9). On pages 292-3 he winds up: "If compounding (or otherwise blending) be judiciously managed, and nothing which is to be really and truly poisonous is used, those compounds are not only palatable, but highly beneficial and conducive to health, as they change the effect which a perpetual round of sameness would have upon the system."

7687. I think you have brought forward those quotations more to show that blending was in vogue in those early days?—That is so.

7688. I think the evidence goes even beyond that. It seems to me a good deal has been made of the history of whiskey in the evidence that we had in the earlier sittings of this Commission, and I think it is very desirable that we should have those quotations on the Notes of the Evidence. They fill up to some extent a gap in the history which has been wanting for some time, and they show very distinctly that the term "whiskey" was applied in 1825 to a spirit made not from malt alone, but from all sorts of materials such as molasses, sugar, raisins, and even cider?—Yes, that is how it appears in the book.

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

FIFTEENTH DAY,

Wednesday, 6th May, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

I. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Sir ROBERT USHER, Bart., called.

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7689. (*Chairman.*) Are you a member of the firm of Andrew Usher and Company, of Edinburgh?—Yes.

7690. That is an old firm, founded I believe in the beginning of last century?—Yes.

7691. And for more than 50 years have you been agents for the Glenlivet Distillery?—Yes.

7692. You are a director of the Brackla Distillery, and your firm are owners of the Edinburgh Distillery?—Yes.

7693. Are those pot still distilleries?—They are all pot still distilleries.

7694. I believe you have no interest personally in any patent still distillery?—Personally I have none.

7695. One of your partners, I believe, is a director of one?—Yes, my lord.

7696. Before 1860, as we have heard, the trade in Scotch whiskey was practically confined to Scotland?—There was very little trade with England before 1860.

7697. And what business there was with England was in the pot still whiskey?—So far as I know it was principally in pot still whiskey.

7698. And it was small in quantity and was sent to England in single casks?—Yes, that is my information.

7699. Was there any blending done prior to 1860?—I could not answer that question, my lord I am not old enough to go back.

7700. But it must have been very small?—I think it was small.

7701. Then there came the Act of 1860, the 23 and 24 Victoria, cap 114, permitting blending in bond. That you do know?—Yes, my lord.

7702. And under that Act the blending that was allowed would permit of the blending of pot and patent still whiskey?—Yes.

7703. But the mixing of British and foreign whiskies for home consumption was not allowed?—The mixing of British and foreign spirits was not allowed for home consumption.

7704. Of course your attention was particularly directed to the Islington decision?—Yes.

7705. Do you belong to a body which I will call the Federated Trade in Scotland?—There is no federation actually now. What happened was that after the Islington case all the interests affected agreed to meet together for a common object. That body is now dissolved because we have attained our object in the appointment of this Commission.

7706. When you say all the interests affected, what do you include in that term—whom and what?—Representatives from the Scotch and North of Ireland grain distillers, the Scotch Distillers Association, and from the wholesale blenders' associations of Edinburgh, Leith, Glasgow, Dundee and Belfast.

7707. Of course, those were commercial undertakings. Can you form any estimate as to the capital represented by those representatives?—Yes, I put it roughly at between 20 and 30 millions.

7708. A meeting took place—I have not the date of it, but it was held in Glasgow, I think?—Yes, in the beginning of 1906 or the end of 1905. I could not be sure which.

7709. Was it shortly after the decision of the magistrate in the Islington case?—Yes.

7710. You were not present, I believe, at that first meeting, but were absent through illness?—I was absent.

7711. But you were elected Chairman?—I was elected Chairman.

7712. And did you head, as I will term it, the deputation that waited on the President of the Local Government Board?—Yes, I headed a deputation twice.

7713. Your object being what?—To have a Commission appointed to settle the matter.

7714. And it was under those circumstances that the trade, in its own defence against the state of things that arose if the magistrate's decision in the Islington case remained, asked for this Commission?—That is so.

7715. And after considerable consideration and delay, in order to determine what should be inquired into, the Commission was given to you?—Yes.

7716. The cause of the existence of this Commission was the defence of their position by the trade?—Yes, to settle the matter.

7717. The movement in favour of the appointment of the Commission was in defence of the interests of the trade?—I suppose you may put it that way. I would rather say it was to settle the condition of affairs which was really most intolerable to all concerned—the public as well as the trade.

7718. You shall have it your own way, but I think most people would think you were not acting for the love of your country entirely?—Oh, no; I was not.

7719. It was a practical matter of business to get the subject settled?—Oh, yes.

7720. Now I will go back. We had come to the year 1860. After that date did the trade in Scotch whiskey in England and in Scotland increase?—I know it increased very much in England.

7721. What was the character of the commodity that was consumed in England and asked for by the public?—What was supplied was blended whiskey.

7722. Of course, the supply answered to the demand?—Yes.

7723. What was the difference in the blended whiskey as compared with the original pot still whiskey?—In my opinion the blended whiskey is lighter and more easily assimilated than a pure pot still whiskey.

7724. The blend would be probably, or the greater quantity of the blend would be probably, pot and patent still blended. Do you blend different distillery products of pot still and different distillery products of patent still?—Oh, yes.

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7725. But what is the result of all these? Is it to mitigate the pungency and mitigate the very high stringent flavours and render it more mellow and softer?—Yes, it makes it less heavy.

7726. In your opinion can the blended whiskey in any way be more injurious to health than what we call the individual whiskey?—Not in my opinion at all.

7727. Do you think it an advantage to be not so strong a flavour?—I do.

7728. And at any rate the public demand has shown that the public appreciate more this blended whiskey than the original individual whiskey?—That is so, I think.

7729. Has that increase in the English trade gone on since the period we have taken as our datum—1860?—Yes, steadily.

7730. Have you seen any wavering in the taste for the blended whiskey?—No, I do not think so.

7731. Could you form an estimate, taking persons who go into the smoking room in a country house at night or any place where you would expect to get good whiskey, not a low class public-house whiskey, but good whiskey, what would you probably find now? Would it be a blended or an individual whiskey?—My experience is it would be blended.

7732. Some of the witnesses have said that patent still whiskey is unwholesome when drunk pure. What do you say to that?—I have never really drunk patent still whiskey pure, but I have drunk malt whiskey pure sometimes.

7733. What do you say as to that?—It does not agree with me.

7734. What is the effect of it according to your view?—It gives me a slight headache—not the morning afterwards, but at the time.

7735. May you be regarded as a seasoned veteran?—I think so.

7736. When the Islington prosecution took place, and after publicity was given to it, was your firm asked by customers to supply pot still whiskey?—Yes, my lord.

7737. What was the result of your sending them that whiskey?—In many instances we had to take it back because their customers did not like it.

7738. And did you take it back?—Yes.

7739. And what did you substitute for it?—We gave them the blended whiskey that they had been using before.

7740. What has been your experience of the export trade?—It has been very much affected by this state of affairs.

7741. I think you draw the line according to your statement at 1880, and you say that up to 1880 there was but very little export business in whiskey?—So far as my firm's experience goes that is so.

7742. Was the quality that was supplied before that the highly flavoured pot still?—I have been told that before that and after that time there was a small quantity of very highly flavoured pot still whiskey sent to America, and there it was mixed with American spirit and sold as Scotch whiskey.

7743. Then since that time what has been the change?—Since that time the trade has gradually developed until now it is a very considerable one all over the world.

7744. You export now, I believe, speaking of your own firm, not only to America, but to India, Australia and South Africa?—Yes, my lord, and many other places.

7745. Where you have agents for your business?—Yes, practically all over the world.

7746. What is the whiskey that you are sending out now for your export trade?—Blended whiskey.

7747. Do you send out now any individual whiskey, pot still or patent still?—Not any patent still individual whiskey, but we have sent out a little pot still pure—both blended and "self," as it is called.

7748. (*Dr. Adeney.*) But you do not send out patent still?—No patent still for sale.

7749. (*Chairman.*) You send out a little individual pot still, a small quantity comparatively, but the bulk of it is blended?—That is so.

7750. Will you tell us a little about this blending process? Is it a process that requires care and requires to be carried out after many years' experience and testing?—We think so, my lord.

7751. Does it require tasters in the same way as you have wine tasters so as to go on tasting the blend until you get the right one?—Yes, my lord.

7752. That is the course that is taken, I understand?—Yes.

7753. And, of course, to attain what would be regarded by the majority of consumers as the best blend may be a question of experiment on different whiskies from different distilleries?—That is so.

7754. And so you go on until you obtain a whiskey which you think is the best whiskey to suit the public taste?—That is so.

7755. When the whiskey is blended under such conditions as you have mentioned, is there any ground for saying that that blended whiskey is more injurious to health and is more objectionable from any point of view than the individual whiskey?—No.

7756. You think the contrary from what you have said?—I think the contrary.

7757. I do not anticipate any such result would be arrived at, but if anything was done to prevent—I do not think anybody asks us to prevent the blending—but if anything was done to prevent blending or materially to interfere with the process of blending, could you see from any point of view how that could be beneficial to the public?—No. May I say with regard to blending that it is a matter that has to be very carefully done, and you have to make your preparations for keeping your whiskey right. Continually with new whiskies we are looking at them and seeing that the quality is right before the casks are filled; all the casks are examined before they are filled, and then after they have been a certain time in bond they are marked for a blend, and each quality of the whiskey in each cask is again individually examined by experts, and anything that is wrong is rejected.

7758. The result of that is this, that great care is taken in the blending?—Yes. I wanted to emphasise that.

7759. And then you have to test the different whiskies before you blend to take care that they are sound and in good condition?—Yes.

7760. Do you give them the advantage of some time before you blend, or do you blend when the whiskies are young and let the time pass then?—No, our practice is to keep the whiskies in the individual casks by themselves and blend them when required.

7761. But it is a question of time. We have heard the three years' limit suggested. Do you blend the whiskey when it is new, or do you blend it after a period of time has expired?—We blend it after a period of time has expired.

7762. I presume you would not be desirous of entering into the exact details of the percentages of your blend?—No, my lord.

7763. I do not know whether that is a trade secret, but in your trade you have arrived at the best blend you can find by your own experience and your own expenditure of capital?—Yes, my lord.

7764. Do not answer me unless you like; but can you give any quantity of either of the two classes of whiskey which you think ought to be employed? For instance, is there any percentage of pot still whiskey, the malt whiskey that you say ought to be in the blend, below which you ought not to go?—No, I do not think I could say that.

7765. A suggestion has been made that there ought to be a percentage, some witnesses said 50 per cent., of malt whiskey in the blend because it should bear the name of Scotch whiskey. Do you agree with that?—No, I think that that would cripple the trade, because different districts require a different style of whiskey. I am aware, of course, that in Australia there has been a minimum fixed of 25 per cent., but I think that it would cripple our trade to a certain extent, for, as I say, in some districts they like a light whiskey and in other districts they like a heavy whiskey.

7766. To do your country full justice they like it heavy in Scotland?—No, I do not think so.

7767. Highland activity and fresh air?—As I say, it gave me a headache in the Highlands.

7768. You may say we are a poor race in England, and we cannot stand so much, but the blend may be taken as a lighter whiskey for persons who do not lead an outdoor life in Scotland?—My experience is that we sell precisely the same blend in Scotland as we do in England.

7769. When you say the districts differ, are you speaking of different districts in Scotland and different districts in England?—In both.

7770. I quite understand in Scotland, because you have the Highlands and the Lowlands, but how do the different districts in England require different whiskies?—I cannot tell you exactly how, but they do.

7771. Where are the districts? Where do our strong men lie?—I should say the Northumbrians are a strong race, but they drink a light whiskey.

7772. They take it light there?—Yes, generally.

7773. Is there any distinction between town and country?—No, I do not think so.

7774. Is not that an individual taste? The individual may like it lighter and some may like it stronger, and it is not a question of the locality of the district?—Yes, I think that is so.

7775. You refer in your *précis* to the evidence of a witness called before us—Mr. Pheysey. I see at question 2638 he was asked: "Will you be good enough to give us the result? First, what it was you attempted to sell, and what it was you succeeded in selling?—We attempted to sell this blend of grain and malt because we were told pretty emphatically everywhere that the public demanded it, and so to prove the fact to my satisfaction I made this blend. I described it on the label, and the result has been an absolute failure as regards business. I do not think we have sold equal to much more than three-quarters of a butt of either of them since we put them on the list six months ago." What do you say to that, because he is speaking of the Army and Navy Stores which have a very extensive business? Does that statement take you by surprise?—Yes. One explanation of that would be that if the Stores' customers were in the habit of drinking a particular style of whiskey and another style is put before them they probably would not like it.

7776. But the Stores' customers are representative of the ordinary average consumer in England. It would astonish you, I suppose, if you were told that they would drink nothing but the pure pot still whiskey?—It would.

7777. There is that evidence before us, but you do not think that could apply at any rate to the whole of the English trade?—I know it does not.

7778. You think that both the pot still and the patent still individual whiskies are much improved by being blended together?—I do.

7779. I will not trouble you about these analyses. I must leave someone more skilled than myself to enter into that question. You do not think much of the analyses of chemists, do you?—No, I do not think very much of analyses.

7780. The principal object of your care, if you would excuse me saying so, is the status and interests of Scotch whiskey?—Yes.

7781. How would you baptise your child? To what whiskey do you think the term "Scotch" should be confined?—I think that both the product of the pot still and the patent still is entitled to the name of Scotch whiskey if made in Scotland.

7782. We will assume it is made in Scotland and made in a pot still or a patent still, because those are the only two methods known. But supposing something is put through a pot still and something is put through a patent still, do not you consider the ingredients and ask what it is?—Oh, yes.

7783. Then you must give us that. What must it be made of?—I think that Scotch whiskey should be manufactured in Scotland from cereals which are converted in the mash by malted barley—that there should be a certain proportion of barley malt in the mash.

7784. You say a certain proportion. If we had to reduce things to certain conditions could you put a limit, elastic or positive, on the proportion of malt which should be used?—Yes, I think 25 per cent.

7785. Positively that as the minimum?—Yes.

7786. And then the rest should be cereals?—Yes.

7787. You do not adhere to the proposition that those cereals should be grown in Scotland?—No. I think that is quite impracticable.

7788. Maize?—Maize certainly, but in Scotland this year there has been a great deal of barley imported. The barley is so unripe in Scotland.

7789. I should like, if we could through you, either to get rid of or establish the claims of rice. Every now and then rice has cropped up in the evidence. Would you allow rice to come in or not?—I am not a practical distiller, so that I really could not give any decided opinion on that.

7790. You do not know the views of others on that?—No.

7791. Would you go to the extent of saying that only what you have mentioned, composed as you have mentioned, should be called Scotch whiskey? Would you prohibit its manufacture otherwise than with those ingredients in Scotland?—Yes, if it was to be called Scotch whiskey.

7792. That is not prohibiting. That is, accepting your statement, if it was 25 per cent. malt and the remainder cereals made in pot still or patent still, you would call it Scotch whiskey. But supposing there is only 10 per cent. of malt; you would not allow that to be called Scotch whiskey because it has only 10 per cent. instead of 25 per cent.?—No, because we consider that the presence of the malt in the manufacture of grain whiskey to the extent I have mentioned has a material effect in giving the quality to the grain, quality which is required, so that if it went below 25 per cent. I do not think the quality of the grain whiskey would be so good.

7793. You do not quite follow me. What would you call that? What are we to do with these degenerate creations when you get 10 per cent. only? Is it to be called Scotch whiskey first of all?—No.

7794. Is it to be manufactured at all?—I do not like prohibitions, but I would call it "spirits."

7795. You would banish the name "whiskey" from it?—Yes.

7796. Then what is it to be called? It would be very indefinite if you said "spirits," because it might be spirits of wine or gin, or anything, if you only called it spirits?—Yes, that is so. I do not think I can go the length of prohibiting the manufacture.

7797. What are we to do with it?—I would call it spirits.

7798. But that would be very difficult, as I point out to you. Supposing under those circumstances a man went into a public-house and said, "Give me a glass of whiskey," ought the publican to give him that if it has only 10 per cent. of malt?—No.

7799. Is it likely that a customer would go into a public-house and say, "Give me a glass of spirits," which might mean rum, brandy or gin, or anything else. That is not what he would ask for. He would ask for "whiskey." I do not see where you would get your sale if you called it spirits?—I follow; but what I was thinking of was, supposing you wanted a highly rectified spirit to make gin in Scotland, it would be a pity to make it illegal to make spirits in the patent still unless there was 25 per cent. of malt in it.

7800. What I want to solve if I can is this: take the 10 per cent. and the 90 per cent. Would that be injurious to health?—No, I do not think so.

7801. As regards taste the consumer can find that out for himself, can he not?—Yes, that is quite true.

7802. Then where are we? Is it a question of your thinking that whiskey ought not to be called whiskey if it has less than 25 per cent. of malt and leaving it to the ingenuity of someone—perhaps by recalling you—to tell us what it ought to be called?—Yes.

7803. If we can get rid of the great virtue of the use of the word "Scotch" and call it "whiskey," would that satisfy your national view?—No, I do not think it would. You mean that anything manufactured in the way in which I have mentioned might be called whiskey.

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7804. No, no; anything that has not got your standard of 25 per cent. of malt, but only 10 per cent. you say ought not to be called Scotch whiskey?—No.

7805. Would it do if it was called whiskey without the word "Scotch"?—No, not in my view.

7806. At present would you say that you think it ought to be called by some other name than Scotch whiskey—by what name we must consider?—That is so.

7807. You wish to give some evidence of some changes that you think ought to be made as to the mixing regulations in the Excise Regulations?—Yes.

7808. You will be examined on that point by my friend and colleague, Mr. Guillemard, who represents the Inland Revenue. Then also you deal with the Whiskey Bill of 1904. I think what you have told me now covers that ground also?—Practically.

7809. I forgot to ask you a question about the keeping in bond. What do you say as to the practical possibility of making regulations for keeping the whiskey before it is consumed?—For two years you mean?

7810. Or three years, whatever it may be. Would it be advantageous, do you think, to the trade or the public?—I think it would.

7811. As regards the trade, the trade could keep it if they liked, if they had capital enough, without legislation?—That is quite true, and I think that as regards quality and age the whiskey that the public are getting now is steadily improving as years go on of itself.

7812. That is, it is mellower and softer to drink, and the public like it better, and the price charged enables it to be kept, and allows the seller to charge a sufficient price?—Yes.

7813. Would you give the same length of time to both classes of whiskey? Would one require more time than the other to be kept properly?—I think a minimum of two years for both would be in the right direction.

7814. (*Mr. Guillemard.*) There is a passage in your *précis* which shows you want to put forward your views as to the Excise regulations with regard to mixing in bond for export. Perhaps you would give the Commission your views upon that subject?—I believe that at present we are not allowed to mix foreign and British spirits for home consumption to sell, but theoretically we are allowed to do so for exportation.

7815. Under what conditions?—I am afraid I cannot speak to that.

7816. I notice in your *précis* that you have left out something which is rather important in that connection. If you mix foreign spirits with British spirits for export you can only export them on condition that they are distinctly labelled as a mixture of British and foreign spirits?—Yes.

7817. Does that influence your position at all?—The reason that I brought that up, and I think I state it in my *précis*, was that it has been laid hold of in America by the chief of the chemical department, Dr. Wiley, and he says you are protecting your home consumer by preventing this, but you will not protect us poor people in America, because you are allowed to do it. As a matter of fact, it is never done.

7818. You do not wish to lay very much stress on it, do you?—I think anything that will help us in our export business is worthy of consideration, and so far as we know in Scotland nobody mixes foreign with British spirits for exportation.

7819. Is this the point that you wish to make, that a mixture of foreign and British spirits is allowed to be exported by the Excise as Scotch whiskey, because if that is the point I say it is not so?—We have already told Dr. Wiley that it is never done.

7820. Are you making a case against Dr. Wiley or against the Inland Revenue, because I cannot quite make out which it is. I think you are rather arguing with Dr. Wiley, and I think the Commission might perhaps leave you to deal with him?—That is the unfortunate position that Somerset House took up, that it left us to deal with Dr. Wiley, and we could not convince him, because he says you are allowed to do this if you like.

7821. No, you are not allowed to do that if you like. You are allowed to do it under certain conditions which make it impossible that at the other end there should be any mistake. When British spirits are mixed with foreign spirits and exported they have to be labelled as a mixture of foreign and British spirits?—Is a cask marked in the same way?

7822. Yes, the cask is marked?—As mixed?

7823. Yes, a mixture of British and foreign?—But our point was that if it is never done, and not required for the trade, why should the Inland Revenue insist on keeping it there?

7824. Does that do you any harm?—Yes, because it has been urged against us that we can do a thing for exportation which we cannot do at home.

7825. Are you suggesting that any regulation of the Inland Revenue can possibly prevent a person in America from saying something that he wishes to say, which is all it comes to?—No, I think I would take it differently.

7826. To come to your next point with regard to the composition of blends, what would be your views as to stating separately what the composition of different blends is?—I think that would be objectionable.

7827. Would you give your reasons for that?—In the first place, as I state in my *précis*, the composition of our blends is a trade secret which has taken us years to establish, and I think it would be very difficult to verify.

7828. How would the verification be done—by analysis?—If I might say so—no. I say it would be difficult to verify. It might be possible in bond, as you know, to check a thing of that kind, but it would be difficult in duty-paid cellars to do so.

7829. You mean by the time it had got to the consumer, according to your view, there would be no way of verifying the truth of the statement?—No, it would be very difficult, and in that way it would open the door to fraud.

7830. In what way, exactly? Do you mean that the public would think that they had a security which they really had not?—That is so.

7831. Now, may I take you back to your definition of Scotch whiskey. You have given a definition that Scotch whiskey must be made of certain materials, in certain proportions, and you object to anything else being called Scotch whiskey. How, exactly, are you going to enforce that? In the evidence you have just given you have taken objection to any compulsory statement of the composition of blends on the ground that it would be very hard to verify; but now you have made your definition of Scotch whiskey, how, as a matter of practical working, is anyone going to enforce that? You want it done, but who is going to do it, and how is it going to be done?—I would say the Inland Revenue could manage that quite well.

7832. This is what I want to put to you. According to you, when a consumer has got a blend the Inland Revenue cannot be any use, and I quite agree we cannot, in saying what the constituents of the blend are. How are we going to be of any use in saying whether a spirit has got 24 per cent. or 25 per cent. of malt in it? How do you suggest the Inland Revenue could possibly do that?—I cannot see any difficulty. You have your officers at the distilleries.

7833. But if it has reached the consumers?—But I suggest that should be insisted on in the manufacture—in the mash.

7834. You refer only to that stage?—Yes, I begin it at the mash, and you can easily check that by your officers.

7835. You sell, I suppose, several blends—Glen Livet in various forms blended in different ways, I suppose?—Yes.

7836. But if you blend Glen Livet with grain whiskey how do you describe the product? Do you describe it as blended Glen Livet?—Yes.

7837. Would you use that expression whatever the proportions of the blend were? The blend is made of Glen Livet and grain whiskey. Perhaps I may start by asking this, what would be about the highest proportion of grain in the blends that you would sell as blended Glen Livet? If it is a trade secret, I do

not want you to answer me?—I think you must excuse my answering that.

7838. I can put it to you in a different way. If you heard that other people were selling as blended Glen Livet a mixture of Glen Livet and grain whiskey you would not necessarily object to that being described as blended Glen Livet, because there was some grain spirit in it?—That is a very difficult question.

7839. You yourself sell a blend which is described as blended Glen Livet, and it has grain whiskey in it?—Yes.

7840. Then you do not consider that the presence in a blend described as blended Glen Livet of a proportion of grain whiskey is any objection?—No, I am afraid not.

7841. (*Dr. Cushny.*) You approve of some regulation with regard to the character of the mash and also the age?—Yes.

7842. Are there any other regulations you would have in the manufacture?—No, I do not think so.

7843. Would you object to Scotch whiskey being labelled in different ways according to its nature?—Yes, but I think it would not do any great good and it would open the door to fraud.

7844. Would it not be fair to the customer that he should know whether he was buying Scotch grain whiskey or whether he was buying Scotch malt whiskey?—I do not think he requires to know that. He takes what he likes.

7845. But he wants to buy something. He may ask for Scotch grain whiskey and be given an old Highland malt or grain, or all sorts of things?—Is your point that it should be put upon the label?

7846. I was asking you whether you thought that it might be labelled?—I do not think there is any objection to people being allowed to label it as they like—Scotch grain whiskey or Scotch malt whiskey—but you would really, as I have said, open the door to fraud and not do any practical good if you made it compulsory.

7847. Would you put it under the Merchandise Marks Act, for example, if a man sold Scotch grain whiskey when he was asked for Scotch malt whiskey?—Should he be prosecuted under the Merchandise Marks Acts if he sold the wrong thing—yes, I think so.

7848. If a distiller uses less than 25 per cent. of malt in the mash you would not allow that to be called Scotch whiskey at all?—No.

7849. Would you allow it to be sold as a potable spirit?—Yes.

7850. Then you would have to have some special name for it, would you not?—Yes.

7851. Would it not be equally allowable or equally justifiable, or equally advantageous that you should have a special name for pure grain whiskey as apart from pure malt whiskey?—They are as a matter of fact called either Scotch grain whiskey or Scotch malt whiskey.

7852. Why not make that compulsory for the sake of the consumer? Would there be any objection?—When sold by themselves, do you mean?

7853. When pure malt or pure grain spirit is sold why should it not be compulsory to sell it under a special label?—I would have no objection to it being called Scotch grain and Scotch malt whiskey. I would call it and sell it as such.

7854. Would it be a disadvantage if blends containing about 50 per cent. of malt were distinguished by some special label from blends containing less than 50 per cent.?—Yes. As I have said, I think that would be difficult to check and would lead to fraud.

7855. Would it not be an advantage for the consumer again?—I do not think it would serve any advantage.

7856. He might get a five per cent. malt whiskey sold as a 95 per cent. malt whiskey. If it were possible, if the Inland Revenue undertook to look after the business, do you think it would be any drawback to the distiller when it is obviously an advantage to the consumer?—But how is the Inland Revenue to check it whenever it goes into duty-paid stocks?

7857. But supposing they could check it?—I do not think I quite see where the advantage to the consumer would come in, because my point is that grain whiskey is a perfectly wholesome thing when mixed with malt or alone. I do not see that it would be an advantage to the consumer at all to know the exact proportions of one and the other.

7858. It is not a matter of wholesomeness. I think all whiskey is wholesome practically—at least, equally wholesome—but it is a matter of taste and flavour?—Then the consumer takes the whiskey that he likes at present.

7859. If he knows that he is getting what he orders; but he does not if he does not know whether the blend contains 95 per cent. or 5 per cent.?—If you insist upon labelling whiskies in that way I think you would destroy the registration. Our labels are all registered all over the world. There are hundreds of them, not our own but other people's, and if you insist on altering our labels all these registrations would be altered and they would be of no use. We should have to re-register all the labels all over the world, and my point is that there is no real benefit to the consumer involved, and therefore no reason to go to all the trouble and expense.

7860. (*Chairman.*) Have you any of your labels with you?—No.

7861. (*Dr. G. S. Buchanan.*) Could you not meet that by supplementary labels in addition to the registered labels?—I am bound to say I am opposed to labelling.

7862. (*Dr. Adeney.*) You could not give us broadly what you put on your labels—what names you apply?—No.

7863. Is it simply Scotch whiskey?—We have our trade-marks, such as "O. V. G." and "Special Reserve."

7864. That would serve our purpose at the present moment if you could give us an idea of what information your labels contain?—I would rather not go into my labels if you do not mind.

7865. I do not want to press it if you do not think you ought to give it?—I would rather not.

7866. (*Dr. Cushny.*) "O. V. G." is one of your brands?—Yes.

7867. Was your attention drawn to the report of the inspector in Western Australia?—Yes.

7868. You do not want to make any remarks upon that?—No, except that in that report he said grain whiskey was made from molasses and potatoes and various other things, which the Commissioners know is absolutely untrue.

7869. But he said that half of the alleged Scotch whiskey was silent spirit?—Yes.

7870. Would that include yours?—He called it a silent spirit.

7871. (*Dr. Horace T. Brown.*) I think it is your opinion that a self patent still spirit might be sold as whiskey—as a Scotch whiskey even—if the materials of the mash were such as you specify with regard to the amount of malt?—That is so.

7872. I suppose your contention is that you might blend any of that whiskey with any other whiskey and still call the product whiskey?—That is so.

7873. You would not differentiate in that case a blended whiskey—you would not wish to put on the label that a blended whiskey necessarily meant that it was blended with a grain whiskey?—No.

7874. You have made some remarks in your *précis* about an analytical standard, and you raise an objection to Dr. Teed's standard. Does your objection apply to any analytical standard which might be brought forward for Scotch whiskey?—No, but my experience of analysts has been a little unfortunate. If the Commission would like to have it, I have the original of an analysis made by Dr. Teed before me, and a copy of another analysis that he made of the same whiskey, which analyses are absolutely contradictory.

7875. From the same sample?—From a sample taken from the same cask.

7876. Perhaps you will hand those in?—Here they are (*handing in documents*). Perhaps I may explain what they are. Some customers of ours in London called Peters, Hall and Co., bought some very fine old whiskey from us, and they supplied it to Sir Tatton

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Sykes, who asked them to get an analysis by Dr. Teed. They got that analysis, and sent it on to Sir Tatton Sykes. This whiskey was bought from us in December, 1904, and was bottled in August, 1905. They got the analysis for Sir Tatton Sykes, and it stated that the proportion of secondary products was 250·1, and that 50 per cent. of it was not whiskey. The second sample was taken from the same parcel, the same cask, and it was sent to Dr. Teed through the wife of one of the members of the staff of Peters, Hall and Co. from a private address; and the second analysis, of which, unfortunately, I have only a copy here given by Dr. Teed, who found it to contain 374·2 secondary products, and to be genuine pot still whiskey.

7877. The original of the last one you have quoted is here, and it is the other one of which you have a copy?—Yes, that is so.

7878. (*Chairman.*) Is this to show that analysts are not to be trusted?—Yes, my lord.

7879. You expressed your judgment as to the value of analysts before, and you said you did not think much of them, and what you are saying now is to confirm that view?—Yes, my lord, and Dr. Horace Brown was asking me some questions about the analyses. I have another one here. I want to justify my distrust and fear of analyses—that is all I wish to do. As I say, I have another one here that is rather interesting, not by Dr. Teed, but by a county analyst. (*Handing in document.*)

7880. (*Dr. Horace T. Brown.*) Is this a duplicate analysis of the same thing?—No, this is brandy. It is to show the difficulty of getting anything very definite out of analyses, because the analyses are in both cases practically the same but the conclusions of the analyst are different.

7881. I should like to ask you about the standardization of the mash. It appears to be your wish that there should be some minimum limit for the malt in the mash?—Yes.

7882. That minimum limit which you propose is 25 per cent. to 30 per cent. Do you consider this 25 per cent. or 30 per cent. really essential for producing the characteristics of Scotch whiskey in the patent still product?—My position is that Scotch whiskey, as at present manufactured, is a very good spirit, and has characteristics entirely its own, which I believe are due to the amount of malt put in in its manufacture.

7883. Have you ever seen a mash made with 10 per cent. or 15 per cent. of malt?—I am not a practical distiller.

7884. I suppose you are aware that if a minimum of this kind were established and the Excise were held responsible for seeing that distillers did not go below that point, that it would put a good many restrictions on the distiller. You would be prepared for that, I suppose?—Yes, I think so.

7885. (*Dr. G. S. Buchanan.*) With regard to what you were telling us about the origin of our Inquiry, all sections of the trade under your chairmanship were represented in the representations that were made to the President of the Local Government Board in favour of an inquiry at which this question of whiskey description could be settled, were they not?—Yes.

7886. That application by the trade was not merely the result of the Islington case by itself—I take that from your *précis*—but there were a number of other considerations as well; there was the general uncertainty of the consumer as to what was given to him under the description of Scotch whiskey, and the desire of all sections of the trade that something should be established with regard to a whiskey description which would be useful not only for home purposes but in connection with foreign trade. I do not know that I am putting it rightly, but there is a considerable section in your *précis* which we have not gone into. Would you say if what I have just put to you is correct, or would you like to amplify it in any way?—I do not exactly understand. I have said that all sections of the trade were anxious to have matters put on a more satisfactory basis.

7887. You refer in your *précis* to this all being the outcome of what you call "the Teed heresy," and my point was that there is a great deal more than the mere question of what you call the Teed heresy involved in the action of the trade. You had all the foreign difficulties that you have told us about, and other matters?—But my point is that they were all brought about by the Teed heresy. The Teed heresy has spread round the world.

7888. But surely, as far as the foreign action is concerned, the Islington case only formed a very small part of the whiskey question. For example in the United States a long series of pure food definitions have been made with regard to different classes of food during the last three or four years under the American food law, so it is not merely a question of whiskey being specially taken. Glucose products, jams, vinegars, cereals, and one thing after another have been taken and official descriptions have been prescribed, and in course of time they have come to spirits. The United States taking this matter up with regard to whiskey, was not merely the result of the Islington case, was it?—No. You notice in my *précis* when I talk of the United States and use the phrase "the Teed heresy," I say that Dr. Wiley unfortunately adopted the Teed heresy. I do not say that the whole action of the United States followed from that.

7889. As a matter of fact there is a very widespread movement in different countries (whether it is right or wrong, I do not say) in favour of getting official definitions and standards for different classes of foods. We have new food laws in our own colonies and new food laws growing up in a great many countries at the present time rapidly?—Yes.

7890. Part of the effect of certain of those food laws is that the Governments concerned supply official definitions, and sometimes also what amount to official guarantees as regards the quality or characteristics of the articles made in and exported from their countries?—Yes.

7891. And naturally where they do that, as for example in the case of Australian wines and French brandy and Dutch butter, and many other things, as they do those things they naturally begin to expect corresponding definitions and guarantees in the case of countries sending foods to them?—Yes.

7892. Considerations like that have had some influence, I suppose, on the trade in considering the question whether it is desirable that there should be a definite understanding as to what Scotch whiskey consists of. You have to meet the foreign difficulty some time or other?—Yes, I think that has probably emerged since we began.

7893. And from the trade point of view in asking the Government for assistance I suppose you would realise that any definition or description or regulation of whiskey that was adopted would involve some means of official control which is not exercised at present?—Yes.

7894. I may take it that that was realised by the trade. The traders whose opinion you voiced were not merely asking that things should remain undecided, but they were prepared that something should be done?—I think we did contemplate that something should be done.

7895. Your own definition, for example, of what should constitute Scotch whiskey would need some administrative action, would it not? Something would have to be done to supervise the standardisation of the mash that you suggest?—Yes.

7896. Some official action would have to be taken?—Yes.

7897. If Scotch whiskey were to be confined, as regards the grain part of it, to grain whiskey distilled in Scotland, that would need some administrative control, would it not?—Yes.

7898. If it is to be effective you must have some means of preventing the English patent still distillers or the Irish patent still distillers from sending spirit which is very similar in character to the Scotch patent still spirit into England to be blended with Scotch pot still spirit?—Yes, I suppose so.

7899. If there was any control in the way you recommend, that would mean that there would have to be some sort of system of invoicing and tracing—some system by which some authority would be able to trace what had happened to particular spirits to see that no misdescription was going on?—Yes.

7900. Would not that involve the blender having to produce to some competent authority his own books which would show what materials he used?—The Excise have all those at present.

7901. As regards blending in bond, that would be so, but as regards blending out of bond?—It would be difficult. Of course in duty paid cellars there is a stock book—I forget what it is called—where everything that comes in is entered.

7902. Have you any experience of blending out of bond in duty paid warehouses in your firm?—Oh, yes.

7903. In duty-paid warehouses can you say equally as well as in the case of bonded warehouses what are the constituents of the spirit in any particular vat or cask by your own books?—Oh, yes.

7904. Supposing, as regards any cask containing a blend you wanted to ascertain for any particular purpose whether it had more than 50 per cent. of malt whiskey in it, would you have any difficulty in it?—From my books?

7905. Yes?—Oh, no.

7906. Do your customers at any time ask you for information on this point, as to how much malt whiskey there is contained in a particular blend?—No, I do not think so. They sometimes ask for a pure malt whiskey, and then they get it in my experience, but I have never been asked by a customer to state how much.

7907. May I ask you a few questions on one or two subjects dealt with in your *précis*. Your firm are agents for Messrs. Smith's Glenlivet Distillery?—Yes.

7908. Does that mean that you take practically all the production of that distillery?—Practically all. A little is sold by the distiller in the North, in his own locality north of the Tay.

7909. But he does not sell it to retailers who retail it to the public as a self whiskey?—I do not know what he does, and I cannot speak as to what he does.

7910. You take practically all the product, and therefore, as a matter of fact, you know that he does not?—When I say all the product the position is this, that in our agreement north of the Tay is left in the hands of Messrs. Smith, and they can sell there as they like.

7911. Their market is limited to that extent?—Yes.

7912. A wine merchant in London, for instance, could not deal direct?—No.

7913. Then for blending purposes is it your practice to get all your grain whiskey from the Scotch grain whiskey distillers?—Yes, all the grain whiskey we use for Scotch whiskey. We have a small trade in Irish whiskey for which we buy Irish pot still and Irish patent still and blend that in Scotland.

7914. (*Mr. Guillemard.*) You bring them to Scotland and blend them in Scotland?—Yes, and sell them as Irish whiskey because they are Irish whiskies.

7915. (*Dr. G. S. Buchanan.*) You have experience of the two classes of grain whiskey, and perhaps you will be able to tell us what difference you think there is between the two?—To be perfectly frank, I do not think I have looked at the Irish grain whiskies that we get. It is a very small business altogether.

7916. Do you get Irish patent still whiskey to blend with the Irish pot still whiskey rather as a matter of sentiment, so as to keep the territorial distinction, or do you think the other would do just as well?—If we are asked for Irish whiskey we give it. That is the reason.

7917. You think it is a proper thing to do?—In exactly the same way, if we are asked for Jamaica rum we give Jamaica rum, and if we are asked for rum we give a blended rum. If asked for Jamaica rum we invariably give Jamaica rum. In the same way we give Irish whiskey if asked for.

7918. (*Dr. Adeney.*) Those are not quite analogous cases, are they?—I think so.

7919. As between an Irish patent still spirit and a Scotch patent still spirit?—I look upon both the Irish pot still and the Irish patent still as Irish whiskies, and I call them Irish whiskies.

7920. (*Dr. G. S. Buchanan.*) The change you have told us that took place in 1860 producing increased popularity and sale of blended pot still and patent still Scotch whiskey was due to various causes that you have told us about, but besides these there was the circumstance of the brandy failure, was there not?—Yes.

7921. At that time the public faith in brandy was very rudely shaken both with regard to brandy description and the character of the brandy?—Yes, of course, the vintage had failed.

7922. And I suppose another reason why the blended whiskey came in was that it was sold at a cheaper price than had been customary to pay for brandy?—That undoubtedly was the case.

7923. With regard to your view that the blend is lighter and more easily digested, and more suited to the public taste, you told us that at a place where you would expect to get good whiskey, a blend would probably be given to you?—Yes.

7924. Would not a high-class blend or most high-class blends contain a very large proportion of malt whiskey?—Not necessarily.

7925. Not necessarily, but would it not be usual?—I do not know that it would.

7926. (*Dr. Adeney.*) We were told yesterday anything between 30 per cent. and 70 per cent. Do you agree with that?—I think so.

7927. You would agree with that?—I would rather not tie myself down to definitions, but really, personally, in my own house, I drink a blend that has a very large proportion of grain whiskey, and we all do the same.

7928. (*Dr. G. S. Buchanan.*) I quite understand that, but I was asking you this: We have had evidence that some of these well-known proprietary blends and good blends contain grain whiskey, but it is only to the extent that is necessary, as has been put to us, to make the blend go well, making the different malts to mix together well, and removing the blueing that you get with the water, and so forth—altogether perhaps 20 per cent., or something of that sort, of grain in the total blend. If that is common, and apparently it is in some of these blends, do you think that that amount of grain whiskey is going to make all the difference between the digestibility and the wholesomeness?—I heard with regard to one of those whiskies that you refer to that they increased the amount of malt not very long ago, and they lost business through it. It was too heavy.

7929. You think that was because it did not agree with people?—That is what I was told.

7930. When your firm were asked a few years ago by numerous customers to supply pot still whiskey, I suppose you were asked to supply it at the same price, and yield the same profits to the retailer, as the blend you had previously sold?—Yes, practically the same price.

7931. That is to say, when you ask us to compare the pure pot still whiskey that you sent out with the blends that you were sending out before we have to remember that it is a malt whiskey and a blend at the same price?—Yes, practically so, I think.

7932. I take it that at the price, which would be the same as the blend, you would not be able to supply them with, say, a Smith's Glenlivet whiskey?—No, not pure; but I should say with reference to that, that the pure malt we supplied was really as matured as our blends.

7933. (*Dr. Adeney.*) Was it a similar malt in quality—about the same?—Yes.

7934. It might be described as similar in quality?—Yes, in some cases it was.

7935. But in these particular cases you refer to where the malt whiskey was returned to you?—Yes, the quality and the age was exactly the same as we put into our blends. We kept out the grain.

7936. (*Dr. G. S. Buchanan.*) Would they be malt whiskies from distilleries which habitually are regarded as sending out good self whiskies?—Oh, yes. In many cases we just practically took the malt distilleries that we were in the habit of dealing with and made up a blend from them.

7937. I suppose in some cases you continued to supply malt whiskey?—Yes, a few.

7938. Then with regard to your export trade, you tell us that though your standard qualities never vary, it is your business to see that particular flavours are suitable for particular places according to the public demand and the public taste. Could you tell me whether as regards the export trade you sell a great deal of bottle whiskey?—Yes.

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7939. Are the labels the same?—No; that is rather badly put in my *précis*. Our standard blends are always the same under the same labels. There is practically no variation in our standard blends, but sometimes we are told that a certain style of whiskey is liked in a certain market, and we do the best we can to get as near that style as possible.

7940. Would you send that out under your own label?—No.

7941. It would be a special label?—Yes.

7942. You were telling us about the people in Northumberland, the miners and the people on the Tyneside liking a light whiskey?—Yes.

7943. Is not another way of putting it that they like a strong whiskey? They like something which has a lot of alcohol in it and is cheap?—I think if you get on terms with the public-houses in the Newcastle district, you would find the strength was not stronger than elsewhere.

7944. Perhaps I have not put it rightly, but is not one characteristic of the sort of whiskey that is drunk by the miners on the Tyneside, for example, that they do not drink very much water with it? They like something which gives them a pretty large quantity of alcohol to drink?—I do not know. I have never travelled there myself, and I do not know what they do.

7945. Could you just tell us what is the ordinary meaning of "average age"? How do you reckon the average age? You say the average age for all your standard blends is absolutely fixed. Is that average age always worked out on the relative values?—Yes, it is worked out quite exactly. We mix different ages together and take the average age.

7946. In proportion to the amount of each constituent?—Yes, it is worked down to a point in our system.

7947. A small quantity of a very old whiskey would make practically no difference in calculating the age?—No, it would be given in making up the statement of age. If it was a small quantity that would be so much at, say, twelve years old.

7948. In reckoning the average age 5 per cent. of some very old whiskey, say a 20 year old whiskey, or something of that sort, would only be reckoned to the extent of 5 per cent.?—Yes, exactly.

7949. Could you furnish us at your leisure with some specimens of the calculations?—Yes.

7950. (*Dr. Horace T. Brown.*) Do you multiply the percentage by the age and divide the sum by 100?—I really forget how the clerk does it, but it is something in this way: supposing you take two casks of seven year old whiskey, and two of five year old whiskey, and two of four year old whiskey—of course, that is a very small number.

7951. (*Mr. Guillemard.*) Are you assuming equal proportions?—Yes. Then you divide that by six. Is not that the right way to do it?

7952. (*Mr. J. Y. Buchanan.*) I suppose a butt of six year old and a butt of eight year old would give you two butts of seven years?—That is it. I can easily send an excerpt from our blending book which will show it exactly, giving the numbers and everything else.

7953. (*Dr. G. S. Buchanan.*) If you will do that it will be very useful. May I suggest you should do it in half a dozen cases, including some complicated ones?—They are very complicated because our blends run to something like 50 butts each, and you have got all sorts of casks. Of course it is understood that would be for the private information of the Commission.

7954. Certainly.

7955. (*Chairman.*) But if it comes to us it must go upon the notes. We cannot take information that is not known outside. But cannot you set it out without names, and so on, under conditions that you do not mind it being published in our minutes?

7956. (*Mr. J. Y. Buchanan.*) Surely the arithmetical method of finding it can be set out quite well without names or anything further?—Yes.

7957. (*Dr. G. S. Buchanan.*) If you would give us in a few words a statement that could go upon the notes as to what the method of calculation is, and also furnish us for our own information with some specimens, I think that would meet the case entirely?—I think Mr. J. Y. Buchanan has put it quite clearly.

7958. (*Mr. J. Y. Buchanan.*) It is simply a sum in averages—nothing else?—Yes.

7959. (*Dr. Adeney.*) We may take it from you that it is a sum in averages?—Yes, but I should guard myself also by saying that although we average it in that way we will not allow the youngest whiskey in our blends to be less than a fixed age which we have fixed ourselves. We would not, for instance, in a good blend put in anything a year old and then bring that up to the average by putting something else in ten years old. It must be a certain age.

7960. (*Mr. J. Y. Buchanan.*) That is guided by the style of whiskey that you wish to produce?—Exactly.

7961. Which does not affect the average?—No.

7962. (*Dr. G. S. Buchanan.*) I notice that when you are dealing with the adoption by analysts of Dr. Teed's method you tell us that you know this was done in certain colonies and the results published while the case was still *sub judice*. Were you referring there simply to West Australia?—Yes.

7963. Are you quite sure that it was Dr. Teed's method that was employed in West Australia?—No.

7964. There are some papers that have been referred to here published in the Journal of the Society of Chemical Industries which show that the analysts used a different method—the Allen Marquardt and not Dr. Teed's method at all for the higher alcohols. The point is perhaps of some interest in view of what you have been saying about analysts, because in the same papers I think you will find that the analyst examined a number of proprietary blends and he made a working standard from those as to what a particular kind of whiskey was, and he found they varied very little. He examined a considerable series by the same method, and he found they varied very little from shipment to shipment. I do not know whether you are aware of that?—No, I do not know all the details.

7965. That, again, is an instance that it is not merely the Islington judgment that has raised this question?—But my point is that the Islington judgment started it and made the analyst out there go on with it.

7966. There is one point with regard to what Dr. Cushny asked you as to giving a description of blends according to whether they contained more than a certain proportion, say, 50 per cent of pot still whiskey. You tell us in your *précis* you object to this for two reasons, first, because you have to suit the public taste, and secondly, because you are afraid it would be necessary to set up a chemical standard. If you have to suit different tastes, is there any special reason why you should not describe your whiskey so as to assist the person who may have a taste for more malt or less malt, as the case may be? Would you regard it as a very serious inconvenience to your trade if you had to describe the blend in some differential way according to whether it contained more than 50 per cent. of malt whiskey in it or not?—I think, as I have said before, I do not think it would do any good.

7967. Assuming that both were allowed the name of Scotch whiskey, with some qualifying addition which showed which class they fell into, would you object to that?—Yes, because, as I say, I do not think it would do any good, but it would open the door to fraud. The only way you could check it would be by analysis, I think.

7968. Then as to the mixing of foreign spirits with British spirits, you tell us in your *précis* that this is never done in practice. Do you know that, as a matter of fact? Have you any special knowledge that it is not done?—No, but I think I give some reasons why it would be rather stupid to do it.

7969. (*Dr. Horace T. Brown.*) It would not pay to do it?—It would not pay to do it. There would be no object in doing it so far as I know.

7970. (*Dr. G. S. Buchanan.*) The reasons are in your *précis*, but I do not think we have them on the minutes. Perhaps you would give them?—It has been alleged that foreign and British spirits are mixed by blenders, but this would be impossible and foolish, as

any advantage in cost would be more than counterbalanced by the difference in the duty. The duty on foreign spirits is higher than our own.

7971. (*Dr. Adeney.*) It is 4d. a gallon?—Yes, and you see that prohibits it. Then, in bond again, it would be foolish, because if we exported the stuff we would forfeit our drawback which we get from the Excise authorities to compensate for the regulations under which we are bound to work in this country. There was a drawback paid to compensate blenders and distillers to equalise the cost as between spirits produced in this country and spirits produced abroad, where the regulations are not so restrictive—I would not like to say irksome, but there are not so many regulations.

7972. (*Dr. G. S. Buchanan.*) Have you been asked in connection with your foreign trade to put the words "Blended in bond," or to certify the fact that the whiskey has been blended in bond?—Yes, and we would like that very much, but we have never been able to get it.

7973. You would like to make that statement as something which would testify to the description which is given on your label? Is that the point?—No, the point is to show it has not been tampered with.

7974. Has any reason been given to you why you should not put "Bottled in bond"?—I think the reason is that it would involve a certain amount of responsibility on the Revenue authorities for which they, as a revenue-collecting body, would get no return whatever.

7975. And I suppose there is also the difficulty that out of bond the thing might nevertheless be tampered with?—Yes, that is so. A case came before me the other day where I found bottles labelled "Bottled in His Majesty's warehouse," so I wrote to Somerset House upon that, and I said, "I thought you did not allow this," and the answer was, "Oh, yes; that was not done in bond, but it was done after it was taken out of bond."

7976. It is more satisfactory that the statement should be prohibited out of bond and allowed in bond?—I think that is so, that is the feeling we have.

7977. (*Dr. Horace T. Brown.*) It is not a misstatement of fact? I suppose it was spirit that had been bottled in bond and which was labelled after it came out?—As to that I have no knowledge, and I do not suppose Somerset House had.

7978. (*Mr. Guillemard.*) They could not have any knowledge if it was put on out of bond?—My point is it would be better if you allowed it in bond, and then you would have some say in the matter.

7979. Why?—Because if you allowed it in bond you could trace it afterwards.

7980. How could you trace it?—Take the case of whiskey bottled in bond, you can tell where it goes to by the permits.

7981. But you cannot trace it right through to the consumer?—By the permits I think you can.

7982. (*Dr. G. S. Buchanan.*) Have you any experience of sealing bottles of whiskey with sealing wax?—Not much, but I have known it done.

7983. I ask you because the question arises as to the bottle trade?—Yes.

7984. Do you consider a capsule as a covering to a bottle is every bit as good a security as sealing wax and a seal, against tampering?—I think capsules can be put on in such a way as will prevent tampering. We put on our capsules with an adhesive substance which necessitates the destruction of the capsule when it is taken off.

7985. Is it more satisfactory to put on a capsule from the point of view of the risk of the spirit being spoilt?—I do not think there is very much in that.

7986. There is one other point which relates to the last two pages in your *précis*, where you give us your memoranda about the Whiskey Bill. You lay great stress there, do you not, on the care that is taken in the selection of materials in the manufacture of grain spirits. You say that no potatoes, beet or other roots are used at all, the materials in general use being maize and barley. We have had that insisted on by a good many witnesses, but is it a fact that if potatoes and beet are used in a patent still you would get anything deleterious in the result?—I speak with a certain amount of diffidence on that matter because I do not know very much about it, but I have seen foreign spirits made in Germany which I believe had been made from potatoes or beet, or something of that kind, and which was perfectly colourless, and very flavourless at first, but if it was allowed to stand with water for a certain time it developed a very abominable flavour, so that is my reason for thinking it is a very great point in favour of Scotch grain whiskey that none of these things are used.

7987. (*Dr. Cushny.*) There was no health question involved in this German spirit; it was simply an unpleasant odour?—I could not talk about health with regard to that; I never drank it.

7988. (*Dr. G. S. Buchanan.*) As a matter of fact it would not pay the grain distillers to use potatoes or beet at the present time?—I am not a practical distiller, and I do not know.

7989. In the last sentence of your *précis* you say if there was an interference with the blends of the kind that you object to, the chief gainers might be the Irish distillers and the French brandy mixers. What sort of French brandy mixers have you in your mind there?—Perhaps I should not have put that in my *précis*, to be cross-examined upon it, but I put it in to show that in 1904 ideas were practically the same as they are now. That was before the prosecution.

7990. The brandy mixer is simply a person who takes the full-flavoured French brandy and mixes it with a grain spirit, does he not?—I do not know about that.

7991. (*Dr. Adeney.*) Referring again to that last sentence of yours, you say another class of gainers would be the Irish distillers?—I think so, too.

7992. What do you mean by that? Do you mean that the Irish pot distillers would be able to introduce their whiskey into the Irish trade in an unblended condition?—Yes, I think if you did anything to hurt the Scotch whiskey trade as it is at present that the Irish people would very probably gain by doing so.

7993. But there would be no harm to the consumer if that was done? You do not suggest that the consumer would be prejudiced in any way?—I do not wish to say anything against Irish whiskey.

7994. Now you have expressed your objection to chemical analysis. I do not wish to quarrel with you if you would limit that objection to some of the methods of analysis that have been employed in the analysis of whiskies. That is really what you mean, is it not? You know we have had before us Dr. Schidrowitz, who strongly objected to the method employed by Dr. Teed, by which Dr. Teed made up his standard, you know that?—Yes, I have read his evidence.

7995. So this is really a battle of methods, and not so much a battle of analysts?—My difficulty is that you have a great number of analysts all over the country. They are not all, shall we say, of equal ability. You might find yourself exposed some day to a pronouncement by a man who was not really first class, and the mischief is done beyond repair at once, because it is very often made use of, and published far and wide.

7996. You would not object to an official Board of Reference, I suppose, to whom appeals on chemical analyses could be taken?—That would be a much fairer way.

7997. But you are aware that it is the methods themselves which are at fault, or some of them that have been employed?—I am glad to hear it.

7998. Now I have gathered from your evidence and from the evidence that we had before us yesterday, that there may possibly be two purposes in view in blending pot still with grain spirit or patent still spirit. The first is to improve the pot still, to render it a well-flavoured whiskey that will stand dilution with pure water or with mineral water without blueing or causing a turbidity. That is one purpose. The other purpose is to dilute the pot still, the dearer spirit, as much as possible with a cheaper spirit so as to produce a very cheap, but at the same time, wholesome whiskey. Those are the two purposes that I gather the blender may have in his mind. Am I right?—I would put the first proposition a little differently. I say, and I think, that mixing pot still with patent still improves both.

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7999. That is to say the first object of the blender is to produce a well-flavoured whiskey that shall command a good sale among a body of customers who can afford to pay a fair price?—That is so.

8000. Am I right in that?—Yes—a potable spirit.

8001. A pleasant potable spirit?—Yes.

8002. And the consumer being able to afford a fair price?—Yes.

8003. Could you tell me what would be the minimum proportion of pot still in such a blend?—I think I have answered that question before, have I not. I would rather not try to put a minimum.

8004. I was hoping you would be able to assist the Commission at this stage by arriving at some sort of classification of the different whiskies that have been mentioned before us. We have had Scotch grain whiskey, Scotch malt whiskey, we have had whiskey, we have had Irish grain whiskey and Irish pot still whiskey, and then we have had the word "blend," but I gather from evidence, which was given before us yesterday especially, that blenders of what we may call the good blends, I mean those who are concerned to turn out the best possible quality of Scotch whiskey, hesitate in using the word "blend," and they would prefer to call it "Scotch whiskey." Now, can you assist the Commission in arriving at any classification of these various whiskies that have been brought before us? Would you object to the patent still spirit being called a Scotch grain whiskey?—No, I do not object to Scotch patent still whiskey being called Scotch grain whiskey.

8005. (*Dr. Horace T. Brown.*) Scotch grain whiskey or Scotch whiskey without the word "grain"?—When sold alone, do you mean?

8006. (*Chairman.*) There is a great difference between "Scotch whiskey" and "Scotch grain whiskey." Which term would you accept?

8007. (*Dr Adeney.*) It is an important point if you can assist the Commission on it?—It is a very difficult one to answer off-hand.

8008. In your English and foreign trade on what do you depend, as characteristic of a Scotch whiskey as against Irish whiskey?—I call pot still whiskey "Scotch malt whiskey" and in the same way I call patent still whiskey "Scotch grain whiskey."

8009. That is the point I want. Have you any knowledge of the old custom or practice of toddy drinking?—No. I sometimes take a little whiskey hot myself.

8010. Can you confirm what I think has been told use before, that at that time it was always new whiskey that was used for toddy drinking? Does that come within your knowledge?—No. I have heard that a great deal of new whiskey was drunk long ago. It was practically hardly ever matured. I have heard that.

8011. But you do not know of your own knowledge? —In the Highlands I have heard distillers tell me that it used to be drunk practically new, but I think they were very strong people.

8012. I should like to ask you another point that arises on the evidence given before the Commission yesterday, and that was the point whether ageing was part of the process of the production of pot still whiskey?—I do not quite see what is gained. Do you mean it is not a finished article until it is aged?

8013. It is not a finished article until it is aged. Do you agree with that?—No, I do not think I would go so far as that.

8014. It has been urged against the suggestion that the word "Scotch" might be applied to a blend containing not less than 50 per cent. of malt whiskey, that Highland malts for instance are so much more highly flavoured than Lowland malts, and that so far as flavouring power is concerned the Highland and the Lowland malts differ materially. But is that quite a fair objection? You never do use an individual malt for blending, do you? Do you not use a number of malts?—Yes.

8015. And may not those blends of malts be both Highland and Lowland?—Yes, but if you fix your standard too high and people want what we call a mild flavoured whiskey, the effect of fixing your standard too high would be that they would use more of the less highly-flavoured whiskies.

8016. Would that be a prejudice to the consumer if that was done?—I do not know, but it would be a prejudice to the Highland distillers.

8017. It would be a matter as between the Highland and the Lowland distillers?—Yes.

8018. So far as the trade at large is concerned, they could obtain the article required?—Yes, I suppose so. It would necessitate some little time before anything like that was done.

8019. So many of the blenders have told us that the art of blending is an extremely intricate one, and that the malts themselves are blended together first, and it occurred to me that probably in that blending both the Highland and the Lowland malts were used. Am I right or wrong in that?—I think you are right in assuming generally that Highland and Lowland malts are used in very many blends.

8020. (*Mr. J. Y. Buchanan.*) One question about that subject which has been before us so often and which is rather confusing. You said that you thought the best way of controlling the designation of Scotch whiskey was to control it in the formation of the mash by specifying a certain percentage of malt which it should contain as a minimum, and I think you mentioned 25?—Yes.

8021. That is to say, in a distillery in Scotland you would expect the Excise to exercise such supervision that the mash distilled in a Scotch distillery, whether pot or patent still, would necessarily contain not less than 25 per cent. of malt?—Yes.

8022. Would any Scotch distillery in those circumstances distil from a mash which contained less than 25 per cent.: do you think it would be likely?—I do not think it would be likely.

8023. Then of these whiskies which have been distilled from the mash with a minimum of 25 per cent. of malt which would be either patent still whiskey or pot still whiskey, you could blend them in any proportion that you pleased? To take an extreme case, you might have one per cent. of pot still and 99 per cent. of patent still, or one per cent. of patent still and 99 per cent. of malt, but these would all be Scotch whiskies, would they not?—I think that is a very extreme case.

8024. I mean it to be extreme. It probably would not occur in practice, but that delimits the thing?—Yes.

8025. And therefore as the Scotch distilleries would in these circumstances not produce a whiskey from anything that contained less than 25 per cent. of malt, the question of what they would do with that whiskey does not arise?—I do not quite follow that.

8026. If on your proposition it becomes obligatory, and it is enforced by the inspector of Excise, that the mash from which the Scotch distiller distils, whether he distils in the pot still or patent still, shall contain 25 per cent. of malt, that excludes spirit produced from any mash that contains less than 25 per cent.?

8027. (*Chairman.*) In examination in chief, I think that was not what Sir Robert Usher said. He said he would not prohibit it, but he would sell it as "spirits" and not as whiskey.

(*Mr. J. Y. Buchanan.*) I was making a conclusion from the fact.

(*Chairman.*) But he did not prohibit it from being made. He only prohibited it from using the term Scotch whiskey. You put it to him that he would prohibit it.

8028. (*Mr. J. Y. Buchanan.*) I did not mean prohibit, but the effect of the regulation would be that it would be so inexpedient that the Scotch distillers would not produce it. They could not call it Scotch whiskey, and therefore there is no need to concern ourselves about providing an outlet for such a product if it is not produced?—No.

8029. And then, when it is produced with that percentage of malt, these two pot still and patent still spirits so produced may be blended in any proportion, and still preserve the full right to the title of Scotch whiskey?—Yes.

8030. (*Mr. Guillemard.*) There is one point I wanted to make a little clearer with regard to the mixing in bond of British spirits and foreign spirits, because I think I left off perhaps with a wrong idea of what you meant, and I want to get clear in my own mind exactly what you want to put before the Commission. At

present British spirits and foreign spirits are allowed to be mixed in bond for exportation only?—Yes. Is not that correct?

8031. That is perfectly correct, and they are allowed to be mixed on certain conditions, the principal condition of which is that the resulting product, the mixture, is described as a mixture of British and foreign. That is allowed at present. Now, do I understand that you on behalf of the trade ask that the Excise should prohibit that practice which they now allow?—Do you mind me asking you one question before I answer that. Are we allowed to mix in bond British and foreign spirits for home consumption?

8032. No, certainly not. You are not allowed to mix them for home consumption, but you are allowed to mix them for export?—Under no conditions whatever?

8033. Under no conditions whatever are you allowed to mix them for home consumption. You are allowed under certain conditions to mix them for exportation. Do I understand that on behalf of the trade, because this is an important point affecting my department, you wish to ask the Excise to prohibit what is now allowed, namely, the mixing in bond for export of British and foreign spirits. The reason for my putting the question is this—so do not answer it unless you are quite sure of your facts, and that you do speak for the trade—I cannot myself go back to anything like the time when it started, but it is perfectly obvious that whatever is allowed to be done by the trade for export must have been allowed by the Excise at the request of the trade. The Excise would not, independently, have suggested that such a thing should be done, but it is obvious the trade must have come to the Excise at some time or another and said, we wish to bond for export British and foreign spirits. I am not speaking of what I know to be a fact, but I think it must have been so?—Yes.

8034. Do you now, on behalf of the trade, say that you wish that to be prohibited, because you go on to say in your *précis* "Somerset House has been petitioned in vain"?—That is so.

8035. Do you mean by that that the trade have asked Somerset House to prohibit what they now allow in that respect? I do not know of it?—I would not like to be quite sure of the association that did it, but it was done by one of the representative associations which met in Glasgow.

8036. Do you think the trade as a whole would be prepared to endorse that view?—So far as my knowledge goes, yes.

8037. (*Chairman.*) Why?—Because it is being taken hold of in America. "Your people allow mixing in bond for exportation, but not for home consumption."

8038. (*Mr. Guillemard.*) Before we get to that you think that Somerset House has been definitely asked by the trade to prohibit that?—Yes, I think I can get that for you.

8039. I wish you to let me have it because my memory is that you are mixing two or three things together, and I want to have it quite clearly on paper whether the trade wish that the permission to blend British and foreign spirits for export should be withdrawn by the Excise; if that is put before the Excise by the trade as a whole of course the Excise would consider it. They have no object in keeping the regulation going?—Quite so. We could not understand it.

8040. I am only putting it like this because I am not quite sure you have got the facts as they are, so if you will look them up I shall be glad?—Yes.

8041. (*Dr. G S. Buchanan.*) If I understand your proposal and your position aright it would be this, that not only this question of mixing British and foreign spirits should be considered, but there should be a complete revision of all the differences which at present exist between the Excise regulations in the case of spirits sold at home and spirits which are exported. Of course, there are distinctions which are perfectly obvious and proper for revenue reasons, but you want an overhaul of the whole series from the point of view of seeing whether any of them could be used prejudicially to the Scotch whiskey exporters in connection with the administration of the foreign food laws?—Yes.

8042. The thing cannot be gone into merely piecemeal, if I understand what the American objection is. There is a whole number of them which rightly or wrongly (very likely wrongly) can be represented as meaning that there is a difference in quality between what is called Scotch whiskey here and what is sent as Scotch whiskey to America?—That is what they say in America. I think your suggestion is possibly that Somerset House might do something a litfle more to help us with regard to exportation.

8043. That is what I think you want?—Yes.

8044. (*Dr. Horace T. Brown.*) In answer to a question by Mr. Buchanan you said that provided that your limit of the mash was established you would consider a blend of any proportion of pot and patent still spirit as Scotch whiskey?—Yes, I think I said that.

8045. But you had previously said (and this I could not quite understand) that you would regard one of the constituents of the blend, that is, the patent still spirit, not as Scotch whiskey, but as Scotch grain whiskey?—Your point is that I call it Scotch grain whiskey when it is alone, and I call it Scotch malt whiskey when it is alone, but I call it Scotch whiskey when it is blended.

8046. Yes?—I see what you mean.

8047. (*Dr. Adeney.*) Would it not do if you made "Scotch whiskey" a generic term which contains the two species, the one grain and the other malt?—I think that is the right way to put it.

8048. (*Dr. Cushny.*) We have left this matter of the "O. V. G." in a very unsatisfactory state. You have said this is not pure Glen Livet, and this Australian authority said it was silent spirit. You wish to deny that?—Yes.

8049. You deny that it is patent still whiskey pure and simple?—Yes.

8050. But you do not wish to give the constituents?—No, but I absolutely deny it is a silent spirit.

8051. (*Dr. Adeney.*) You made a remark with reference to Scotch patent still spirit being of a very good quality, which I have no doubt it is, but you do not wish to suggest by inference that the Irish patent still spirit is necessarily of poor quality?—No, I do not wish to infer that.

The witness withdrew.

Adjourned for a short time.

Mr. JOHN GILLON DAWSON, called.

Mr. J. G. Dawson.

8052. (*Dr. Cushny.*) You are a managing director of Messrs. John Gillon and Co., Limited?—Yes, I am. I might mention at once that I come up here at the request of the Edinburgh and Leith Wholesale Wine and Spirit Dealers' Association.

8053. Your business is of old standing?—Yes, very old standing.

8054. How long have you been connected with the whiskey trade?—I have been connected with it since 1863.

8055. What is the tradition of your firm as regards the method of making whiskey?—In what way?

8056. Did they use the pot still?—Yes, we used the pot still.

8057. And what materials?—We are not distillers; we are merely blenders.

8058. What is your definition of whiskey?—For what is known as Scotch patent still spirit it should be made from 25 to 30 per cent. of malted barley, and other cereals.

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8059. Do you limit it to grain whiskey—that grain whiskey must be made with from 25 to 30 per cent. of malt?—I understand it is so made.

8060. Would you state what cereals are to be used?—I am not a distiller. I leave that to the distillers.

8061. What is your impression as regards malt whiskies? Are they capable of being drunk alone?—Not in my opinion.

8062. Not even the best?—No, the best least so.

8063. We have heard some evidence that they are drunk quite largely in London?—Yes.

8064. Do you still consider them unsuitable for drinking alone?—That is my experience.

8065. What do you consider is the object of blending?—To make a good drinkable whiskey.

8066. And also to make it cheaper?—Yes, necessarily to make it cheaper by using grain spirit.

8067. Malt whiskey improves by ageing?—Yes.

8068. Does grain spirit also improve by ageing?—Yes, it does.

8069. If a dealer orders some new Scotch whiskey, what do you give him?—A blend.

8070. Would you mind stating in general terms the percentage of the blend?—It depends upon the price which is paid.

8071. How far do you go down in blending?—I cannot name a percentage.

8072. (*Chairman.*) Will you give us the highest and the lowest price of the blends?—The lowest price is about 3s. per gallon in bond.

8073. And the blend is in what proportion?—The proportion is about 10 per cent. of malt and 90 per cent. of grain.

8074. That is the lowest. Now, will you give us the highest?—The highest is about 10 per cent. of grain and 90 per cent. of malt.

8075. (*Dr. Cushny.*) You call both of those blends, I suppose?—Yes.

8076. Do you sell pure grain at all?—Sometimes we do; usually under the name of the distilleries.

8077. You found that malt whiskey shipped abroad was unsaleable, and was not appreciated?—Yes.

8078. What was the complaint about it?—The complaint was that the whiskey was too heavy, and that people could not drink it.

8079. What did you do to correct that?—We put in some grain spirit.

8080. Have you had any similar experience since the Islington case?—No.

8081. Were you asked for malt whiskey after the Islington case?—Yes, we had several inquiries.

8082. What did you do?—We supplied it.

8083. With what result?—It almost all came back—in every case except one people asked us to take it back.

8084. What is your idea with regard to compulsory ageing and bonding, say for two years?—The Association, whom I represent here, thought that two years would be a fair age for grain spirits.

8085. Have you any personal objection to that?—None whatever. I think it would be desirable.

8086. (*Chairman.*) Would you say two years for grain, and the same for pot?—I would say a little longer for pot—perhaps three years.

8087. (*Dr. Cushny.*) Would you recommend it?—I would.

8088. I notice you say in your *précis*, "provided it applies to all spirits"?—Yes. The difficulty of course necessarily comes in there with gin, rum and brandy. The difficulty is whether that can be arranged.

8089. You would not keep gin for two years, would you?—Gin, I understand, is sold new, and the trouble would come in there as regards price, because if you make the distiller keep his grain whiskey for two years he is then under a disadvantage compared with the gin distiller.

8090. Is it your impression that we could insist upon gin being kept in bond?—The Scotch whiskey distiller would be under a disadvantage because it would perhaps cost him 6d. per gallon more for the two years that he had to keep it.

8091. Would you object to gin being kept?—I do not think it would be fair.

8092. Is that the opinion of your Association also?—Yes.

8093. What are you going to do in the case of Australia, which has fixed two years?—They get a certificate of the age.

8094. What about gin?—I do not know anything about that, but when they order whiskey they get a certificate of the age of the whiskey given before a Justice of the Peace that the whiskey is at least two years old.

8095. (*Dr. Horace T. Brown.*) What evidence is brought forward in a case of that kind to show that it is two years old?—You simply go before a Justice of the Peace and make an oath to that effect.

8096. (*Dr. G. S. Buchanan.*) You go before a Justice of the Peace and make a statutory declaration?—Yes, a statutory declaration. We ought to get a certificate. We asked it from the Customs, but the Customs would not give it.

8097. (*Dr. Cushny.*) You consider that blends of Scotch whiskey must be entirely composed of whiskies made in Scotland only in order to be called Scotch whiskey?—Certainly.

8098. You would not insist on the blending taking place in Scotland, would you? What I mean is that a London blender might fetch down some malt whiskey and some grain whiskey, both from Scotland, and blend them?—If the whiskies were all Scotch, I do not see any reason why he should not be allowed to blend them in London if it were done in bond.

8099. But you would refuse to let him do it out of bond?—I think it would be safer to be done in bond.

8100. Then you would object to notifying the proportions of the blend?—Yes.

8101. And you said that such a notice would destroy trade abroad. What is the meaning of that exactly?—If you made a standard for whiskies necessarily, you would have to alter all your blends to start with, and you have no guarantee either that the alteration would do any good.

8102. Then you say the retailers to whom you supplied are notified. What are they notified of exactly?—That they are buying blends.

8103. But they are not notified of the proportions?—No, certainly not.

8104. (*Dr. Adeney.*) Can they judge the proportions from the price?—Not the proportions.

8105. Can they judge the proportions approximately from the price?—Do you mean the proportions of malt and grain spirit?

8106. Yes. Can they judge them from the price that you charge them?—If a man knows his business he can get a fair idea from that, and from the flavour of the spirit.

8107. (*Dr. Cushny.*) You export a good deal?—Yes.

8108. All blends?—All blends entirely.

8109. To the United States and to the Colonies?—Yes.

8110. Have you noticed any rapid development of this in recent years, or has it been a steady growth?—Since 1886 there has been a large increase in the sale.

8111. What considerations do you take into account in the making of a blend? How do you make a blend? Do you always make the same blend?—Yes; once I make a blend I keep to the same blend.

8112. Have you several blends?—Yes.

8113. And you blend them according to what rule—do you blend them according to taste and flavour?—I make a blend using certain whiskies as may be required.

8114. Is it always the same?—Yes, the same age of whiskies, and the same proportions of patent still whiskey and malt whiskey.

8115. And the same proportions of different distilleries?—Yes.

8116. Are they invariably the same?—Yes, they are invariably the same unless one happens to be bad, and then I put that out and put in another one.

8117. You think the taste of the public has changed now?—Yes.

8118. In what direction?—I do not find any difference in the last year or two in the taste of the public.

8119. But since 30 years ago it has changed?—Yes. Thirty years ago there was very little demand for Scotch whiskies, and after the blends were introduced the taste of the public changed materially.

8120. Have you found the taste of the Scotch public alter also?—Our trade is more in England.

8121. Is grain whiskey kept in bond at all?—Undoubtedly.

8122. To an extent comparable to malt whiskey?—Yes.

8123. Do you mean quite as long?—As a rule, longer, I think. It depends for what purpose you wish it. If you wish to make a light whiskey you require older grain.

8124. Do you mean to say that grain whiskey is kept longer than malt whiskey?—In some cases, for certain blends, but, as a whole, I do not say that it is.

8125. I cannot quite understand how you state that entire malt whiskies are quite unsuitable for drinking?—That is our experience; we have no demand for them.

8126. (*Dr. G. S. Buchanan.*) Do you encourage a demand?—Our travellers offer them.

8127. (*Dr. Horace T. Brown.*) Is it a question of price?—I should not think so. We go about among brewers, and it may be that the brewers and wine merchants do not want them.

8128. (*Dr. Cushny.*) With regard to the blends, would you object to some differentiation between the different classes of blends? For instance, you send out a blend containing 90 per cent. of grain and 10 per cent. of malt, and another blend containing 90 per cent. of pot still?—Yes.

8129. Do you not think it would be well to make some difference in the labelling with regard to those?—We do that.

8130. Do you think it would be objectionable to make it compulsory to have those labels?—Undoubtedly.

8131. You think it would be objectionable?—Yes.

8132. Will you tell me why, exactly?—It would do no good, and it is no guarantee. It would lead to fraud and misrepresentation, and they would tie you down to using certain whiskies which you might otherwise not wish to use.

8133. How would it tie you down to using certain whiskies?—For example, a distillery might give up making a certain whiskey, and if you have a certain percentage of the whiskey of that distillery in your blend, and that distillery stops making it, you would have to change your blend.

8134. I do not think anybody suggests that you should make a definite statement as to any one distillery, but you might have it that it is to be 50 per cent. of malt and 50 per cent. of grain?—I do not think it would do any good to have that.

8135. Would you object to that?—Yes, decidedly.

8136. Could you give us any reason for that?—I could give you no reason beyond what I have already given.

8137. Those reasons are not very convincing?—I do not see that it would do any good. It is no protection to the public.

8138. If the public thought it was a protection then would you object?—No, not at all, not if they wanted it.

8139. (*Dr. Horace T. Brown.*) You stated that your father used grain and other cereals in Scotland in a pot still?—Yes.

8140. He used grain and other cereals, as well as malt and barley in a pot still?—Yes, he told me so.

8141. Can you give the Commission any information about the date of that?— No. My father died in 1877, so that it is an old story. I perhaps should not have put that in my *précis*.

8142. This was a whiskey made very much on the Irish lines?—No, it was a Lowland malt distillery—at Linlithgow, near Edinburgh.

8143. We have had it in evidence that grain has not been used, at any rate, for a very long period in Scotch pot still distilleries?—Yes, for many years prior to that date they only licensed malt whiskey from malted barley, and they could not use anything else but malt.

8144. That is going back a long way. Would you consider that grain whiskey made in a patent still is entitled to the term Scotch whiskey when sold by itself?—Yes.

8145. I see that you recommend the standardisation of the mash, that is that in the patent still the mash should consist of at least 25 to 30 per cent. of malted barley?—Yes.

8146. Have you any special reasons for that other than that it is the custom at the present time?—No, none except that we like the whiskey we are now getting, and we would not like to see it other than it is.

8147. Have you no other reason?—No.

8148. (*Dr. G. S. Buchanan.*) You tell us that when buying whiskey from samples you are particularly careful so as to get a satisfactory grain whiskey. Can you tell us what you regard as a bad grain whiskey?—It may be tainted with wood, for example.

8149. From the cask?—Yes, from the cask.

8150. Is that the main thing?—There are other things. Perhaps it has been put into a cask that has had bad wine in it—bad sherry or something of that sort. You have to sample every cask carefully.

8151. Accidental circumstances of this kind and not circumstances that necessarily relate to the method of distillation?—No.

8152. (*Dr. Horace T. Brown.*) They are circumstances affecting the cask and not the whole distillation?—That is so.

8153. (*Dr. G. S. Buchanan.*) When you had orders from wine merchants in England for malt whiskey and found that what you supplied was not acceptable, were you supplying the wine merchants with malt whiskey at the same price, and with an article which would give them the same profit as the blends which you had supplied hitherto?—No, they were paying a few shillings more per case.

8154. Were they proposing to charge more for the whiskey they sold?—They sent the order at a price, and we supplied it.

8155. You do not know whether they charged more to their customers?—No, I do not know anything about that.

8156. Is your advocacy of a two years' age limit on behalf of your Association?—Yes.

8157. Is the object of that that you desire to improve the character of Scotch whiskey as a whole—as a class?—Yes.

8158. Not because you consider it necessarily deleterious, but because it is an improvement?—It is to a certain extent deleterious, and there is a certain amount of ethers in new whiskey which you get rid of by keeping it for two years.

8159. You say in your *précis* that the bye-products in every distillery vary from day to day, and that is a reason why no chemical standard could be enforced. To your knowledge has anybody ever tried at a distillery a series of chemical analyses for this purpose?—No, because chemists rarely agree in their analyses.

8160. That is merely an opinion on your part?—I know by the variations shown in blueness of colour when mixing them with water and also by the flavour.

8161. That is mentioned as a reason against chemical analysis being applied?—The same whiskies vary at distilleries week after week in that respect.

8162. Would you only allow a London blender to mix Scotch grain and Scotch malt and call it Scotch whiskey?—In bond.

8163. You would restrict him?—I see no reason why he should not be allowed to do it.

8164. Surely there are any number of blenders at the present moment who mix in London, and it would greatly dislocate the trade making requirements of that kind?—I do not see why. I do not see why a man should not be allowed to mix them in London if it was whiskey.

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8165. What about the wine merchant in London. Are you not going to allow him to mix duty-paid spirits?—Yes.

8166. Would you stop that?—No, I would not.

8167. Supposing your blender in London has the Scotch pot still malt whiskey that is suitable for blending, and he has an Irish grain spirit both on his hands, and he wants to blend them, would you prevent him from doing this and calling it Scotch whiskey?—Yes, it would not be honest. One is Irish and one is Scotch, as I take it from you.

8168. (*Chairman.*) Ireland would complain, would it not?—Yes.

8169. (*Dr. G. S. Buchanan.*) I only wish to know the extent of the importance you attach to trade descriptions. You attach very great importance to trade descriptions?—Yes.

8170. Do you think that would be in the interest of the public?—To stop it?

8171. Or is it solely in the interest of the trade?—I do not think it would be fair in any sense to allow a man to mix Scotch and Irish whiskey and call it Irish or Scotch.

8172. At the same time you strongly protest against the mixture of malt whiskey and pot still whiskey being declared?—In what way?

8173. You told us that you disliked the declaration on a Scotch blended whiskey that it contained a proportion of malt and grain?—I object to putting the proportions—not a proportion.

8174. I understood, in answer to Dr. Cushny, that you objected to even saying that it contained even more or less than 50 per cent. of malt?—I do not think that question was asked me as to more than 50 per cent. of malt.

8175. Then I ask it now: would you object to stating on the label of the blender that it contained more or less than 50 per cent. of malt whiskey?—I do not think the blender should be asked to declare what his blend consists of.

8176. You do not think that would be in the interests of the consumer?

8177. (*Chairman.*) You have no objection to calling it blended whiskey?—No.

8178. (*Dr. G. S. Buchanan.*) You have none of your labels with you?—No.

8179. You do make different blends?—Yes, names are given to the different blends that we have.

8180. You give no information as to them?—No.

8181. Have you had any of your whiskies objected to abroad?—In America we have, because they were said to be made in a pot still from malted barley only.

8182. (*Dr. Cushny.*) They have been admitted now?—They have.

8183. (*Dr. Adeney.*) That complaint has not been pressed?—They have been admitted under certain conditions.

8184. (*Dr. G. S. Buchanan.*) Have you altered the character of what you send them?—I have made no alteration.

8185. (*Dr. Cushny.*) Would you mind saying under what conditions they have been admitted?—I can give you the conditions. They are subject to the Law Courts. I will read the conditions under which they have been admitted. "United States and imported whiskies. Washington, April 25th. It has been decided to admit whiskies manufactured abroad, but alleged to have been misbranded under the Pure Food Law. Such whiskies will, however, be subject to adjudication in the Courts of Law."

8186. (*Mr. Guillemard.*) The effect of that is that instead of trying to reject the spirit at the port of entry, the Americans are leaving it to be decided in the ordinary way by analysis when it reaches the inside market?—If a man goes into a grocer's shop and buys a bottle of that whiskey, you are liable to be hauled up for selling that whiskey. That is what has been done now. I have not heard of any case being taken under this law.

8187. They have given up stopping them at the port of entry?—Yes. I had a letter from the Foreign Office yesterday to that effect.

8188. (*Dr. Adeney.*) Do you know anything of Irish whiskies?—I cannot speak about Irish whiskies because we sell very little of them.

8189. You would know something of them if you sell them?—We sell a little.

8190. Do you know anything of the Irish patent still spirit?—I have had some of it.

8191. Is it very different in flavour from the Scotch?—It has a different flavour.

8192. A distinct flavour?—I think so.

8193. Would anybody but an expert taster detect a difference?—I should think so.

8194. I should like to ask you what do you associate with the term Scotch when applied to whiskey?—Whiskey made in Scotland.

8195. That is all?—That is all.

8196. Then with regard to analysis of whiskies, you suggest the results of analyses of whiskies from the distillery vary very much?—Yes.

8197. You have not any evidence here to prove that?—I did not bring any evidence to prove it.

8198. Are you aware of evidence existing?—I have seen a long string of analyses by Dr. Tatlock to that effect.

8199. Do you happen to know—I am asking you for an opinion whether similarly flavoured blends of whiskies, such as your own blend, which you say you work up always to a similar flavour vary in analysis. Have you had those blends analysed?—Yes.

8200. Have the results of the analyses varied?—They have not always been the same, and there have been considerable variations by different chemists.

8201. You spoke of being in a difficulty to see how a legal limit to the amount of malt in a blend to be called Scotch whiskey could be enforced. Do I understand you aright?—You could enforce it if you make such a law, but I can see difficulties in the way of that, because there are many different kinds of malt whiskies. You cannot compare a Lowland malt whiskey with an Islay, or Highland or North Country because they are all different.

8202. But as a matter of fact do you in your blends use only the Highland?—No.

8203. Then you, in the first instance, blend your malt whiskies?—No, we blend them all together, grain and malt.

8204. In any of your blends have you only Highland malt?—No.

8205. Both Highland and Lowland?—I beg your pardon, we have one blend which is only Highland malt and grain.

8206. But most of your blends have malt?—They have Highland, Lowland, Islay, and Campbeltown.

8207. Does your objection stand to a legal limit?—I do not see what good it would do.

8208. That is putting it in another way?—If you say a certain proportion of grain and malt, which malt are you going to make the man take?

8209. That I should leave to the trader?—You would take a malt which costs 2s., or you would take a malt which costs 4s. 6d.

8210. That I should leave to the trader. You put your objections on a different ground now, do you not? You state the difficulty is because Highland malts differ from Lowland malts, and you use mixtures of those?—It would be very misleading to the public to make such a rule.

8211. You do not make it plain to my mind where the misleading would come in?—It is misleading in this respect, that there is such a great variety of malt whiskies made in Scotland.

8212. That is a question of malt whiskey made from a pot still which produces the majority of the flavour?—You do not get much flavour out of a Lowland malt.

8213. You get more out of a pot still?—I get more flavour out of Lowland malt than out of patent still.

8214. So that there is an advantage in using it and paying a higher price for it?—Yes; otherwise we would not use it.

The witness withdrew.

Mr. THOMAS HUTCHISON, called.

8215. (*Mr. J. Y. Buchanan.*) You are a member of the firm of Hutchison and Co., wholesale wine and spirit merchants, of 35, Bernard Street, Leith?—Yes.

8216. Your firm has been in existence for about a century?—Yes.

8217. You are engaged entirely in the wine and spirit trade?—We are now. Formerly we did a certain amount of blending of teas.

8218. Your business is chiefly confined to England and Scotland?—Yes.

8219. You also export abroad to clubs, and regimental messes. Is that all over the world?—Yes; wherever the various regimental messes are we send to them.

8220. And you export also to private individuals?—Yes.

8221. You export to them only whiskey of the best class?—Yes.

8222. Do you export to them proprietary brands, or all your own?—All our own.

8223. Your experience dates back to 1885?—Yes.

8224. At present you are representing the Edinburgh and Leith Wholesale Wine and Spirit Dealers' Association?—Yes.

8225. Which has a capital of £4,000,000?—We compute it at that, roughly.

8226. Your firm has records of purchases and sales since 1830, I understand?—Yes.

8227. From consulting those documents, do you find much difference in the trade in that time in what you bought and sold? I suppose there would not be as much whiskey sold in those days as now?—No; it was quite trifling in those days.

8228. Would it be made up in brandy?—Our trade was more in wines in those days.

8229. Is Leith a great place for importing wine and also for brandy?—No; I should not think Leith was more particularly famous for brandy than any other port.

8230. Not in those old days, but in these days?—Possibly so.

8230A. You find in the invoices that both malt and grain are invoiced as *aqua*, or *aqua vitæ*?—Yes, in the early days— in 1832, 1833, or 1834.

8231. Was the word "Whiskey" absent?—No, not entirely absent. I find a certain invoice in the year 1831 of what from the price one judges to be grain whiskey made in those days which is called by the curious term—"Common Whiskey." I have that invoice here. That was in the early days. That is the only printed form that I could find with the word whiskey upon it. (*The same was handed to the Commission.*)

8232. That was a grain whiskey. Of course, that was made in a pot still then?—Yes, naturally in those days.

8233. How did they distinguish the other whiskies in those days?—I have five or six invoices here: they are all 1830, and they are invoiced as grain *aqua*, or malt *aqua*.

8234. That is the distinctive designation?—Yes.

8235. (*Chairman.*) Will you show me one of grain and one of malt?—Yes, my lord. (*The same were handed to his lordship.*)

8236. (*Mr. J. Y. Buchanan.*) After 1846, the date of the introduction of the patent still, did the malt distillers describe their manufacture as *aqua*?—Yes; curiously they still seemed to retain the word "*aqua*."

8237. And the grain distillers took the word whiskey?—Yes.

8238. Is that quite general amongst your records?—Yes, quite so.

8239. So that the malt distillers put no great stock on the name of whiskey?—Apparently not.

8240. What is your definition of Scotch whiskey?—Scotch whiskey is a spirit distilled in Scotland from cereals in which a mash has been converted by a proportion of malt.

8241. Would you put a minimum limit to the amount of malt?—In the mash?

8242. Yes?—At present I am credibly informed that the proportion of malt used in the manufacture of Scotch whiskey in Scotland is 25 to 30 per cent., and the result of that is very satisfactory; and, therefore, I presume personally that it is probably the proper quantity to be used.

8243. Of course, you are not a distiller?—That is so, but I could quite understand from the point of view of common sense that a certain proportion of malt must be used to thoroughly convert the mash.

8244. And it must be barley malt?—I understand so.

8245. Your view is, and you support the view, that Scotch whiskey should be made from cereals, and with a proportion of malt of not less than 25 per cent.?—If my information of 25 per cent. is right, I should say not less than 25 per cent.

8246. You do not claim to know anything of the medicinal properties?—No, nothing whatever.

8247. What is your experience as to the different consumers in towns and the country? Will you shortly tell us that?—I think there is no doubt that the consumer in town prefers a lighter spirit than the natives of the Highlands of Scotland, and that the consumer in town probably prefers a lighter spirit than dwellers in the country.

8248. Is there any marked difference between the towns that you supply?—No; I would not go the length of saying that there is a marked difference as regards towns. There are certain styles of whiskey which seem to suit certain districts better. Probably owing to the difference of the water certain whiskies drink better in one place than another, in the same way that certain teas are better in one part of the country than in another.

8249. Is it your experience that in the North of England they are taking a lighter whiskey?—I am glad to say that I do not do very much trade in the North of England.

8250. What is your objection to the North of England?—I hear from my competitors in trade that there is very little profit to be made there.

8251. (*Chairman.*) Is it less than you make in Scotland?—I believe so.

8252. How do you account for that?—As I say, I do not do very much business in the North of England, but I understand there is very severe cutting of prices there.

8253. (*Mr. J. Y. Buchanan.*) Were you asked for pure malt whiskey after the Islington case?—Yes, we were in some instances.

8254. And you supplied it?—Yes.

8255. With what effect?—It was not appreciated.

8256. Was it sent back?—No. We are not very large dealers in that way, and the small quantity that we were asked for we usually corrected by sending a proportion of grain whiskey to re-blend, or re-mix. I do not think we had any instance of it being actually returned.

8257. You think that people do not like the all-malt whiskey because they find it too rich?—Yes.

8258. But that for sedentary people the grain whiskey is more suitable, or, at any rate, that a larger proportion of it is more suitable?—Certainly.

8259. Your main endeavour is to supply the market with what it wants?—Naturally.

8260. What is your view about stating the constituents of a blend on the bottle?—I object to that. I object to the various proportions that the blend contains being stated on the label.

8261. You do not object to it being stated to be a blend?—No, I do not object to it being stated to be a blend.

8262. Would you object to a qualitative statement, that is to say, a blend of grain and malt—I mean without the quantities?—I would call it a blend of Scotch whiskies, or blended Scotch whiskies.

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8263. That would cover either only malt whiskies or all grain, or the two together?—Yes.

8264. In point of fact, it would convey really no information to the purchaser?—It would be no definite information to the purchaser, but it would inform him that it was not a self whiskey.

8265. It would not go far?—No.

8266. I suppose the difficulty in getting any information from a statement as to the nature of the blend is that the whiskies so blended are not the same one year as another?—They do vary slightly from one year to another.

8267. And it really would give the person no very great information if he were told that it was so much malt and so much grain?—No.

8268. Because it might be a strong malt or a weak one?—Quite so; or a young malt, or an old one.

8269. Of course, that is a different kind of difference. What is your view about a standard being established under which a blend containing a given proportion of malt and grain should be entitled to be called whiskey?—Do you mean a standard of manufactured spirits blended, or a standard in the mash?

8270. What do you mean exactly in your *précis* when you say: "I object to a standard being established"?—I mean that I object to a standard being established that given proportions of malt and grain whiskies be used in a blend.

8271. You find a difference in the blends that suit different parts of the country?—Yes.

8272. What is your view about a compulsory time limit?—Speaking for the Association I represent, and speaking also on my own behalf, I should hail with satisfaction a regulation being passed.

8273. What do you think would be a fair time limit?—I should think about three years probably.

8274. Do you mean that that should be compulsory?—Yes.

8275. (*Dr. Adeney.*) I gather from your *précis* that your customers are amongst what we may term the better classes, or the richer classes?—Yes.

8276. Have you any experience of Irish whiskies?—Yes, a limited experience.

8277. You know both the patent and the pot Irish whiskies?—Yes, I have seen both.

8278. Do you sell Irish pot still whiskey as a self whiskey?—Not pure.

8279. You sell it blended?—Yes.

8280. Do you blend it?—We buy the blend in Ireland.

8281. And you sell that?—Yes.

8282. Do you blend any Scotch whiskies yourselves?—Yes, a considerable quantity we blend ourselves.

8283. Do you blend individual malt whiskies with grain spirit?—At one time we did.

8284. Do you do so now?—Do you mean one single malt whiskey with grain whiskey?

8285. Yes?—Not unless it is for a special purpose.

8286. It is not usual?—No.

8287. Do you usually blend Highland and Lowland malts?—We blend Highland, Lowland, Campbeltown and Islay.

8288. The object of my question is that we have been told that the Highland is so highly flavoured, and the Lowland is so lowly flavoured—if I may so term it—that there is no comparison between the two. I was anxious to find out if that comes in practically in your blending trade?—Undoubtedly it does.

8289. In a given blend you always use both, and I would be glad if you would make it clear to my mind how it does come in?—What do you wish me to speak to now?

8290. On this question of a limit of malt in a blend to say 50 per cent., which was what one witness suggested yesterday, an objection has been taken by another witness against that because malts differ so much in their flavouring power. If you used 50 per cent. of a Highland malt you might get too highly flavoured a blend, and if you used 50 per cent. of a Lowland malt you might get too weak a flavour for a blend?—Yes.

8291. Is that a practical objection?—A practical objection to what?

8292. A practical objection to a legal limit to the minimum quantity of malt in a blend to be called Scotch whiskey?—I think in itself it certainly is. Do you mean in order that the blend should be called Scotch whiskey?

8293. Yes?—I think it is a matter of fact; if the blend was all grain whiskey it would be Scotch whiskey, or if it was all malt whiskey it would be Scotch whiskey, if made in Scotland.

8294. If any of your customers outside Scotland asked you for Scotch whiskey what would you send them—would you send them Scotch grain whiskey?—We would send them blended whiskey, because we understand commercially when whiskey is asked for it is understood to be blended whiskey.

8295. Then you want some other designation for the word Scotch patent still whiskey?—If we are asked for Scotch grain whiskey we would supply Scotch grain whiskey.

8296. If you are asked for Scotch whiskey you would supply a blend?—Certainly.

8297. And you would not supply a patent still whiskey unless you were asked for Scotch grain whiskey?—No.

8298. Would you mind telling us the minimum proportion of malt that you sell in your blend? Do not answer the question if you do not want to?—I should say that the lowest quantity that we use is somewhere about 12½ to 13 per cent. of malt.

8299. (*Dr. G. S. Buchanan.*) Does that include some that you supply to the clubs and regimental messes that you have told us about?—No.

8300. You would not regard that as your high quality?—No.

8301. One of your objections to a limit, such as Dr Adeney has been asking you about of 50 per cent. of malt in blended whiskey, is that the style of whiskey suitable for one country or climate is totally unsuitable for another, is it not?—Yes.

8302. What is agreeable and palatable in the Highlands of Scotland does not please the taste of a dweller in London?—That is so.

8303. You say here that this is borne out in the case of other liquors such as beer, and it is well known that the lighter forms of lager beers are more popular in certain districts and at certain seasons of the year than the more heavy English beers?—Yes.

8304. Would you advocate that there should be no distinction made by the seller between lager beer and ordinary beer?—No, I would not.

8305. (*Chairman.*) I want to ask you as to this word "common whiskey" in this invoice. How do you translate that word?—I have asked several experts, several people of experience, and it seems to puzzle every one of them. It has been suggested to me that the term there means commercial whiskey, whiskey made for sale. As I understand the term, "common brewer" means a brewer who brews for sale. Then they tell me that it possibly means a general type of whiskey.

8306. Common whiskey is a type of low grain whiskey?—Yes.

8307. (*Mr. Guillemard.*) I see you say that you would not object to a regulation being passed making it compulsory to retain all spirits in bond for a period of two years provided that sufficient notice was given to the trade so that their stocks might be regulated. Might I ask what sort of stock your own firm holds?—Do you mean the quantity?

8308. Yes. I mean how long do you calculate that your stock in hand would last you?—We always have a sufficient stock in hand, and we are always replenishing it as required. We understand that we have a sufficient stock for ordinary requirements.

8309. If you did not put any more into your stock, how long would your present stock last you?—We probably would not have more than two years' stock in hand.

8310. It would mean that putting on the condition that you had to hold two years' stock would not affect you?—No, but one would have to provide more warehouse accommodation.

8311. A firm who did not hold as large a stock as two years' stocks might take a different view, and might object to the two years' limit?—Yes, they might possibly.

8312. (*Dr. Cushny.*) You say that one of your blends has 12½ to 13 per cent. of malt in it?—Yes.

8313. But it is not so good a blend as that with 50 per cent. of malt that you supply to the messes?—I would not agree to that, because a blend containing 50 per cent. of malt might contain 50 per cent. of split new malt, which would be an unpalatable and unwholesome blend.

8314. What would you say if there was a two years' limit?—If you had a two years' limit that is another matter.

8315. You would object to dividing blends into two kinds, calling them all Scotch whiskey, but calling one Scotch whiskey blended with malt, say, above 50 per cent. of malt? Would you object to that?—Yes, I would, because I think it is contrary to the fact. It is splitting hairs. As all whiskey made in Scotland is Scotch whiskey, why should you differentiate in your blend?

8316. That is differentiating Scotch blended whiskey?—It is a style of whiskey.

8317. So is your blend.

8318. (*Dr. Adeney.*) Is it not very much dearer?—It depends on the age entirely.

8319. Age for age?—Yes, age for age it is dearer.

8320. (*Dr. Cushny.*) Do you not think it would be a great comfort to the consumer if he has a blend that is a fairly strong malt? You might give him 12½ per cent. of malt, or you might give him 90 per cent. of malt under the same designation?—No, I do not think it would be any comfort to the consumer. I think it might be a comfort to the consumer if he knew he was getting a thoroughly matured whiskey.

8321. But then he does not know?—No, he does not know, but putting it on the label that it contains a certain percentage of malt and grain would not inform him that it was matured.

8322. But still it would add to his comfort?—Yes

The witness withdrew.

Mr. Richard Francis Nicholson, called.

8323. (*Dr. Horace T. Brown.*) You are, I believe, one of the managing directors of J. and W. Nicholson and Co., Limited, Distillers and Rectifiers, of Three Mills, Bromley, E., and St. John Street, Clerkenwell?—Yes.

8324. You are here, I believe, on the invitation of the Royal Commission to give evidence?—That is so.

8325. Do you consider that the materials used in the manufacture of whiskey ought to be under any restriction?—I think it would be a good thing.

8326. Do you think that the processes themselves ought to be restricted in any way?—No, not the processes of manufacture

8327. What restrictions would you place on the materials to be used in the manufacture of whiskey?—I suggest that whiskey should be made solely from corn.

8328. From corn of any kind?—Yes, of any kind.

8329. You mean by corn, cereals or anything else?—I should leave out rice, which I suppose is a cereal, and yet you would hardly call rice corn.

8330. You would not include rice in your permissible materials?—No.

8331. Will you give us any good reason why you should exclude rice?—Rice has a very coarse flavour of its own, and as far as I know it has not been the practice to use it for whiskey.

8332. Does it give a distinctive flavour to the spirit—a decided flavour?—A decided flavour.

8333. A flavour which would render it inapplicable to whiskey?—Not suitable.

8334. You do not mean that it would be necessarily deleterious?—No.

8335. Would you include all the ordinary cereals amongst your materials?—Yes; barley, rye, oats, wheat and maize.

8336. In what way would you restrict the conversion of the mash?—I say made wholly from corn, and so the conversion should be carried through with malt, either malted barley, malted rye, or some form of malt—a germinated corn.

8337. That they should be the saccharifiers?—Yes.

8338. Would you limit in any way the amount of malt to be used in the mash?—No, certainly not, because at present we have no definition whatever of malt. The malt used by some of these Scotch distillers is very different from the malt we use ourselves in London. I fancy we carry our malting process to a much greater extent than they do. In Scotland you will find the malt has much more of the character that it had when the malting process was under the control and restriction of the Excise. At that time the malt was Excise malt, and was virtually a uniform article; but now, owing to the increased knowledge on the subject of malt, and especially from information received from abroad where the matter has been very much studied, especially during the last ten years, there has been a vast advance in the knowledge of malt.

8339. Do you think that the advance in knowledge has come from Germany?—No, I hope not.

8340. I understand you would not put any restriction on the quantity of malt to be used?—No, because in the first place we have no restriction of quality.

8341. You would mean this, I suppose, that if you had malt with a considerable amount of converting power you would use less of it in order to give effect in the mash tub?—Yes.

8342. And therefore you do not see why you should be called upon to use a larger amount than is necessary to produce the conversion?—Yes.

8343. Is that the argument?—Yes.

8344. So that you consider the malt used in the manufacture of whiskey is mainly for producing saccharification?—Principally.

8345. Do you think it improves in any way the flavour of the whiskey?—To a certain extent it would, but the flavour of whiskey, I take it, is formed in three ways—in one way, by the material used; the second way is by the form and condition of fermentation; and thirdly, by the way in which the spirit is separated from the wash in the various kinds of stills.

8346. You regard the influence of the malt in the mash as subsidiary?—Yes; that is only one of many reasons.

8347. That is as regards the actual flavour given by the malt itself?—Yes.

8348. You would not like to be under any restriction with regard to quantity?—I think it would be unwise.

8349. You know that we have had many suggestions from Scotland with regard to limiting it or fixing a minimum of 25 to 30 per cent. of malt. Would you object to that?—Yes, and that particular quantity is generally recommended by the distillers who make yeast. They use an additional amount of malt, not for the sake of the whiskey, but to increase their produce of yeast.

8350. You know cases where very much smaller quantities of malt are used than 25 to 30 per cent.?—Yes, and you will find it stated in previous Commissions.

8351. You know that the product in such cases is whiskey?—Yes.

8352. A patent still product of course?—A Coffey still product.

8353. You consider that the processes of distillation should not be in any way interfered with?—

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No. I think the more we can learn about the different processes, and the more we can experiment, the better it will be for the public and the trade.

8354. Would you necessarily confine the production of whiskey to a mash converted by malt?—Yes, I think so. I think that is the proper way to do it.

8355. You would not include, for instance, the conversion by acid?—No.

8356. Nor by the so-called amylo process?—No.

8357. You would not consider that a whiskey?—No.

8358. Are you makers of whiskey yourselves?—No, we are makers of spirit.

8359. You do not make whiskey?—No.

8360. You are also of the opinion that no declarations should be required? You say in your *précis* that no declarations should be required, as they could only be enforced in respect of spirits in bond, and control would be lost on payment of duty, especially in the case of bulk. Would you kindly say exactly what that means and to what those declarations refer?—Declarations of what the blend consists of. As long as the whiskey is in bond of course the constituent parts are known, and if a label is attached to what is bottled in bond undoubtedly it would be correct; but you cannot mark the whiskey in the case of bulk; you can only mark the cask, and the consumer does not see the cask. The duty would be paid upon that cask, and it would go through various hands, and during that time very likely it would be blended again, or reduced, or altered, or changed, and the identity of the contents of that cask would be absolutely lost.

8361. That does not apply necessarily to goods bottled in bond for instance?—No, it does not apply to goods bottled in bond where the actual package with the certificate reaches the consumer.

8362. You are speaking more especially of whiskey sold over the counter?—Yes, and of whiskies that are bottled duty paid.

8363. What is your opinion with regard to compulsory bonding?—That it is quite unnecessary.

8364. Unnecessary in what way?—Because I take it that the average age of all whiskey that goes into consumption, owing to the large supply there is of old whiskey at the present time, cannot be less than 2½ years, and is probably over 3 years' average age.

8365. Then you think it desirable that whiskies should have age before they are consumed?—That is a question of degree entirely. The heavier whiskey, which has the larger proportion of bye-products, ought to have a great deal of age. As the degree of impurity is reduced, so the necessity for age diminishes. In the case of grain whiskey, shall we say a very plain grain whiskey having few of these deleterious bye-products, the ageing process is finished at an early date.

8366. Would you think it, then, an unfair thing to impose a minimum bonding period for all whiskies alike?—I do not think it would do any good, and I do not see how you could impose a minimum bonding period for one class of spirits only. Take the case of gin. There is no need for ageing the spirit that gin is made of, because the spirit goes to a rectifier, and the impurities are taken out by means of distillation. If spirit was allowed out of bond in one case I do not see how it would work to enforce it for another denomination of spirit.

8367. You think it would be impracticable to draw a line between rectified and non-rectified spirit?—Rectification is not carried out in bond.

8368. You think the present plan of supply and demand meets everything necessary with regard to the ageing of spirits?—I think the supply and demand does meet it, and that the public are satisfied is, I think, pretty well evidenced by their continued patronage.

8369. You wish to make some remarks about British and foreign spirits as regards their treatment. I suppose you mean their treatment in bond?—Yes. At present British and foreign spirits for home consumption may not be blended, and I think that is quite right. I think they ought to be treated on the same footing, and I should certainly suggest in the case of export that it should be forbidden to blend them as well, principally for the reputation of this country in foreign markets.

8370. But that is not receiving the same treatment as they do at present?—I wrote this in a great hurry in reference to home consumption. The foreign point has only just turned up.

8371. You would advocate that it should now be impossible to mix British and foreign spirits in bond even if they are to be exported?—Yes, although I believe it never is done.

8372. It is giving rise to difficulties, I understand?—Yes.

8373. Then you have certain suggestions to make with regard to the carrying out of certain restrictions. You state that in your opinion the Excise should return to the old system of different colours for their permits. Will you briefly describe to the Commission what that means?—Some years ago British spirits and foreign spirits were distinguished by different coloured permits, and in bond or elsewhere they were not allowed to be mixed. They were kept separate right the way through, and I suggest that the Excise should adopt one colour for British spirits made from corn, and, secondly, another colour for British spirits made wholly or partially from materials other than corn; and, thirdly, another colour for foreign spirits, and that in no case should it be permissible to mix spirits of a different denomination by means of a blend in bond.

8374. There would be no control out of bond for anything of that sort?—Only under penalty.

8375. It would be very difficult to follow, would it not?—No, because I think that as regards British spirits wholly or partially made from materials other than corn the very large proportion goes simply for methylation, and is under the control of the Excise the whole time; but I have heard that duty has been paid on some of that spirit, but where it has gone to I cannot say.

8376. That is to say, on spirits made from other materials than corn?—Yes, on spirits made from other materials than corn.

8377. Molasses, and so on?—Yes. Our firm have never sold for duty-paid use, for consumption, molasses spirit, although we are large makers of molasses spirit for methylation only.

8378. But you have reason to think that those spirits occasionally get into consumption?—I have heard of one case.

8379. Do you know where they go?—No. It was simply by hearsay—it was not to my own knowledge; but if it was, I look upon it as a case of unfair competition, and inadvisable in the interests of the public.

8380. What is the nature of those spirits generally?—Unstable.

8381. Are they unwholesome necessarily?—They are unstable because, owing to the more or less impure material they are made from, they are liable to change owing to decomposition. They oxidise very freely, and they are always changing.

8382. Do you know anything about the composition of those spirits, as to the amount of so-called impurities that they contain, and the sort of co-efficient they would have?—No, I cannot say that, because very many of those impurities, unfortunately, chemical science has not yet mastered. There are several peculiar features about that class of spirit which, as far as I can make out, no chemist in this country or elsewhere, can explain to us.

8383. (*Chairman.*) Would it be convenient to you to attend here next Monday week?—Yes.

(*Chairman.*) Then we will adjourn now.

8384. (*Dr. Horace T. Brown.*) If you will then give us some further information on this point we shall be glad?—Certainly I will.

The witness withdrew.

(Adjourned to Monday, May 18th, at 12 o'clock.)

SIXTEENTH DAY,

Monday, 18th May, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. R. F. Nicholson.

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Mr. RICHARD FRANCIS NICHOLSON, recalled.

8385. (*Dr. Horace T. Brown.*) When we adjourned last time you promised to give us some more information about British spirits made from molasses. How would you describe in general terms the nature of such spirits as compared with the grain spirit made by the same process of distillation in the patent still?—I should describe it as a coarse common class of spirit if it is made from molasses. Molasses are merely the refuse of the refineries. The molasses themselves are full of all sorts of impurities, chemical and otherwise, and the distiller is uncertain of the material that he is using for fermentation. The consequence is that the spirit is coarse and unstable and liable to oxidise, and so on, and is unfit for consumption.

8386. You would consider that such a spirit was unfit for consumption either alone or blended with grain or malt spirit?—Totally.

8387. You also stated that the larger proportion of the molasses spirit goes for methylation, and, therefore, pays no duty, but that to your knowledge duty has been paid on such spirits?—I said that I had been told so, but I have never come across a case myself.

8388. You cannot state within your own knowledge whether it is used for potable purposes or not?—I have no knowledge of my own.

8389. You have told us that you are makers of grain spirit. Is this grain spirit made from the same materials and on much the same lines as the grain spirit manufactured in Scotland and Ireland?—On very similar lines, and to all intents and purposes from the same class of materials.

8390. Does the spirit itself differ in any respect from the Scotch or Irish grain spirit?—The spirits are almost interchangeable. We know that British spirit goes to Scotland for blending purposes, and till within the last two or three years it went in large quantities, and also that Scotch spirit went to Ireland, and Irish spirit went to Scotland for the same purpose. At the present moment both Scotch and Irish spirit is coming into London, and is being used in place of London grain spirit, so I look upon it as being very similar.

8391. Very similar in general qualities?—Yes.

8392. We have been told that in Scotland such grain spirit has for a long time been recognised as whiskey, even when sold unblended with malt. Do you consider that a spirit made on the same lines in England is equally entitled to the term "whiskey"?—Quite so.

8393. Then you would consider that you are makers of whiskey?—A Scotchman or an Irishman coming into our distillery and seeing the manufacture and tasting the product I think would decidedly pronounce it to be grain whiskey.

8394. You are, I believe, large blenders of Scotch and Irish whiskey?—We are.

8395. These blends, I suppose, contain a certain proportion of grain spirit?—Some of them do.

8396. Do you mind telling us what is the origin of the grain spirit used in these blends?—Corn.

8397. Is it English spirit or is it Scotch or Irish spirit?—No, spirit.

8398. English?—Yes.

8399. (*Chairman.*) What you are now using?—Yes.

8400. (*Dr. Horace T. Brown.*) Under what denomination or designation do you sell these blends?—We sell them as blended whiskies.

8401. Do you sell them as blended Scotch and Irish whiskies?—If it is blended with Scotch whiskey it is blended Scotch whiskey, and if it is blended with Irish whiskey it is blended Irish whiskey—blend meaning mixed.

8402. There is nothing to indicate either on the invoice or label that the whiskey is blended with an English grain spirit?—We do not put any indication on the label.

8403. Or on the invoice?—No.

8404. (*Chairman.*) Not even the word "blended"?—Yes, we sell it as "blended."

8405. But you do not put the particulars?—No, my lord.

8406. (*Dr. Horace T. Brown.*) Then I may take it that in your opinion blended Scotch or blended Irish whiskey does not necessarily mean that all the components of the blend have been manufactured in Scotland or Ireland, as the case may be?—No, I do not think so, and certainly that was the view of the Committee of 1891.

8407. Do you found your practice on the findings of the Select Committee of 1891?—That is so.

8408. Perhaps you will kindly refer us to the passage you rely upon?—At page 7, section 5, of the Report, you will find one point: "The addition of patent still spirit, even when it contains a very small amount of bye-products, may be viewed rather as dilution than as adulteration, and, as in the case of the addition of water, is a legal act." The other reference I should call attention to is on page 5, section 3, in which the Committee state they do not attempt to give a legal definition of whiskey, but they refer to the evidence of Dr. Pavy, and then make some statements of their own.

8409. According to that it might be considered whiskey, but the question is whether it could be designated as Scotch or Irish whiskey with accuracy?—I claim it can be stated as blended Scotch or blended Irish.

8410. Would you consider it hurtful if you had to declare on your invoices and labels that such blends contained English grain spirit?—Our trade is almost entirely confined to bulk, so it would be merely on the invoice. We do very little bottling indeed.

8411. Should you object to some indication of the fact being placed in a conspicuous position in any public-house supplied by yourselves, that the grain spirit was of English origin?—Certainly not; no objection whatever.

8412. I gather from your *précis* that you are opposed to any alteration in the present regulations regarding British and foreign spirits, and I think a question was asked you last time about that. I see you are of opinion that the present regulations with regard to blending British and foreign spirits in bond should be

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discontinued, and it should not be legal to do that?—I am of opinion that British and foreign spirits should not be blended in bond.

8413. Although the present regulations allow it?—They only allow it for export.

8414. Will you give us your reasons for that opinion? Why should they not be blended in bond?—Principally for the reputation of British spirits abroad.

8415. It has given rise, has it not, to difficulties with regard to the export trade, especially in the United States where they have objected?—I believe it has there.

8416. (*Chairman.*) Why does it take away from the reputation?—Because any spirit derived from any origin could then be blended with a British spirit and exported.

8417. (*Dr. Horace T. Brown.*) But do not the United States authorities object to it very strongly on the principle of not admitting any article into the United States which cannot be legally sold in the country of origin?—I believe that is correct.

8418. You have made certain suggestions with regard to different coloured permits. Will you kindly explain a little more in detail exactly what you would propose to do in such matters?—I should like to see a definition of whiskey to this effect: "Whiskey is made from corn"; or if I may put it in regular form: "In these islands whiskey is a spirit manufactured solely from corn, with an aroma and taste peculiar to itself, accentuated to a greater or less degree."

8419. It would be rather difficult, would it not, to define exactly what those properties of taste and odour are?—A great many people have tried and never succeeded.

8420. But it was more with regard to the system of permits that I wished to ask you?—It is with that idea of a definition of whiskey and to ensure better control that I suggested that all British spirits made solely from corn should have a coloured permit of their own; that another coloured permit would be issued with all British spirits made from materials other than corn; and thirdly, that all foreign spirits should come under a different coloured permit.

8421. You would have three distinct denominations?—Yes.

8422. (*Dr. G. S. Buchanan.*) At your distillery you make only one kind of grain spirit, do you not?—At present.

8423. Has it been otherwise in the past?—Yes, certainly, we have made different sorts.

8424. One spirit for blending and another kind of spirit for rectification?—No—simply trying various kinds of corn.

8425. At any given time a particular grain spirit could be utilised either for rectification or for blending, as the case might be, as you required it?—Yes, that is so.

8426. Then with regard to the materials used, I gather from what you told us last time that you do not have any minimum quantity of malt except that which is necessary to secure a satisfactory conversion?—That is so.

8427. The malt which you use is manufactured with the object of securing the highest converting power?—Manufactured specially for the purpose in the most approved fashion.

8428. Some of the maize which you use comes from South America, does it not?—It comes from all over the world.

8429. In Scotland in some of the Scotch grain distilleries we were told it was the custom for the distiller to buy South American maize and pay for it in advance and receive a ship-load which he had to take. Is that the ordinary experience?—With us, no. People give us credit, and there is another thing, too, we buy on a sample, and if the ship-load does not come up to sample the load is refused.

8430. You are in a position to do that?—Absolutely. It is done first of all by the corn broker, and, secondly, if he did not detect any poor corn we should.

8431. Comparing your grain spirit with the Scotch and Irish grain spirit, can you say anything about the bye-products chemically of the one or the other? Have you had analyses made at any time of your spirits and compared them with Scotch and Irish spirit?—No, I do not think we have.

8432. Are they comparable at all in the matter of price? Can you give any comparison?—We get a better price. We frequently find ourselves undersold by the Scotch and by the Irish even in London.

8433. At the present time you tell us that Scotch and Irish grain spirit is coming into England, and formerly that English grain spirit went into Scotland and Ireland?—Yes.

8434. Do you anticipate that the conditions may be reversed again in the future?—Generally, if spirit has been sent to Scotland it has been done to prevent the Scotchman dumping spirit in England—in the spirit of retaliation.

8435. With regard to foreign spirits, are there imported any foreign spirits which resemble grain spirit in their general characteristics?—Sometimes foreign grain spirits are imported, but that is only a small proportion of what comes.

8436. Are there any foreign grain spirits imported which you consider might suitably be utilised for blending with whiskey?—I have not sufficient knowledge of the foreign grain spirits.

8437. You told us that you would prohibit the mixing of foreign spirits with British whiskey in bond. But supposing you had some suitable grain spirit from foreign sources comparable to what you produce, or the Scotch and Irish produce, would you object to that?—Personally I should distinctly.

8438. Do you think that mixing foreign spirits with British spirits out of bond ought to be prohibited also?—I think so.

8439. For the same reason that you gave us before, for the better reputation of the spirit?—Yes, and you would be dealing with a foreign spirit the history of which you knew nothing about.

8440. That would mean some means of control which does not at present exist, would it not?—That would be controlled by the Excise.

8441. But mixing out of bond for the home market?—I think it might be prohibited.

8442. You told us on the last occasion that British and foreign spirits were kept separate and in bond or elsewhere, and they were not allowed to be mixed. Are those words "or elsewhere" correct? Was there any prohibition further than mixing in bond?—In old days in rectifiers' stocks which were duty paid, British and foreign spirits were kept separate.

8443. And that was supervised by the Excise?—Yes.

8444. Would you claim that your grain spirit as a potable liquor improves with age?—It certainly does.

8445. You would class it with the Irish and Scotch patent still products in that respect?—Yes, but we class it rather ahead of them.

8446. You mean in rapidity of ageing?—No—in purity of substance.

8447. In the result of the ageing?—Yes, and in the result of the manufacture.

8448. You told us that you thought compulsory ageing was unnecessary because at the present time the average age of all whiskey that goes into consumption cannot be less than two and a half years, but, of course, it is no consolation to the consumer who gets a brand new spirit that the average age is two and a half years if you take spirit all over the country. There is whiskey, is there not, which contains new grain spirit to a considerable extent?—We have no knowledge of it ourselves. We do not deal in it.

8449. You do not send it out?—No, we have nothing to do with it.

8450. May we take it that you give the two and a half years' limit to the whiskey, whatever blend it is?—Quite so; before it goes into consumption.

8451. In talking about control you told us that it would be difficult to control a two years' bonding period because the new spirit would be required in order to go to the rectifier, and the rectifier of course could use new duty-paid spirit?—Yes.

8452. Would it be actually very difficult to check a new spirit that went out from a distillery like yours only wanted for rectification?—I think it would be difficult.

8453. Take your own case for example. Do you send out new grain whiskey for any other purposes than rectifying?—We sell to chemists and to other rectifiers. Those are the only customers we supply.

8454. But the chemist would not use that spirit direct? He would use it for rectifying, would he not? I am speaking of your new grain?—Chemists buy a great deal of plain low-grade spirit and use it as a solvent.

8455. In your own rectifying premises there would be no actual difficulty in keeping apart the new spirit solely for rectifying purposes?—I do not understand the question.

8456. You rectify your new grain spirit on your Clerkenwell premises?—Yes.

8457. Would you have any difficulty there in keeping the new spirit on one side and using it solely for rectifying purposes?—No, we should have no difficulty.

8458. Do you send out your grain spirit as such at the present time to customers such as wine merchants or blenders?—Very seldom indeed.

8459. Or publicans?—No, never to publicans.

8460. Your firm in some cases supplies publicans in London with all their spirits, does it not?—With the great bulk of their spirits.

8461. Do you make any stipulation in those cases against their mixing the spirits together for any purpose?—No, because we could not control them.

8462. The publican, as far as you are concerned, can do as he likes with the spirit once you have supplied it?—Yes.

8463. Or describe it as he likes?—Exactly.

8464. You do not put any direct or indirect pressure on him on those matters?—No, none whatever.

8465. Then with regard to the whiskey, would the publicans receive from you what has been blended in bond at your Bromley distillery?—At the duty free warehouse—yes.

8466. They would get it direct?—Yes.

8467. They receive Scotch and Irish whiskey, I suppose, of more than one quality?—Several qualities.

8468. May I take it that, broadly, the amount of pot still product in the Scotch whiskey or in the Irish whiskey varies according to the price?—Yes, that is partly true, but not entirely so.

8469. Price and age no doubt. Would there be other considerations?—Yes, there would be the various classes of Scotch and Irish whiskey. They vary in price.

8470. But taking it broadly would the high priced Irish whiskey or the high priced Scotch whiskey contain more of the pot still product?—No, they certainly would not. I am thinking of various cases at the present moment when the highest classes would contain more grain than they do malt.

8471. Blends such as you have been speaking of would be sold by the publican to the public as Scotch and Irish whiskey, would they not?—I assume so.

8472. Without any qualification at all?—No. "Blended" is a technical term, and "Blended," as a rule, I do not think reaches the public. It is an Excise term.

8473. And the publican sells the whiskey supplied by your firm and considers that as Scotch whiskey, without thinking there is any special qualification necessary with regard to the word "Blended" or otherwise?—I think so. They regard it as a class of Scotch whiskey.

8474. I think Dr. Harris told us in his evidence that it was customary, for instance, with your "N. S. S." whiskey, and that associated with the "N. S. S." whiskey was an advertisement which used the words "Special Scotch Whiskey"?—Never. "N. S. S." was used simply to encourage the curiosity of the public, and we never supplied a translation. We received an immense number of letters supplying us with various translations, but we never gave one ourselves.

8475. It is merely a trade mark or a trade description?—It is the mark of a proprietary article.

8476. (*Dr. Horace T. Brown.*) Is it a registered mark?—I think it is registered; I am not absolutely sure, but I think so. The label must be registered; all our labels are registered.

8477. (*Dr. G. S. Buchanan.*) A photograph was sent to the Commission, in illustration of that contention, of an ornamental advertisement fixed outside a public-house where the letters "N. S. S." appear in the centre, and "Nicholson's Old Scotch Whiskey" appear round the margin?—That is the publican's matter entirely. We did not put them there. I should like to see that photograph. (*Photograph handed to the witness.*)

8478. I put that question because Dr. Harris was asked by the Commission whether he could substantiate what he said, and that photograph was sent in to the Commission?—That is the publican's matter; he put it up on his own responsibility.

8479. I do not want to lay too much stress upon it?—No, but I want to explain it.

8480. Could you tell me with regard to the mixing of Scotch and Irish pot still whiskey with grain whiskey, whether you could keep to some limit after which you are not entitled to use the words Scotch or Irish? For example, if you get down to 10 per cent. of pot still Irish whiskey, and the rest is grain whiskey, whether from England, Scotland, or Ireland, do you think that that entitles the product to the distinctive term "Irish whiskey"?—No, but it entitles it to the term "Blended Irish Whiskey."

8481. You would still allow it to be called "Blended"?—Yes.

8482. Then you attach considerable importance to the word "Blended"?—Well, I think it is a statement of fact.

8483. You told us that in the case of whiskey you supply all your customers direct from bond, did you not?—No. You asked me whether they received it from there. Some of it goes direct from bond, but the bulk of it would go to the rectifying houses and is distributed in smaller quantities from there, and very likely reduced from the natural strength of the whiskey to the strength ordered by the publican.

8484. And it may be further blended?—No, not as a rule.

8485. That is not your ordinary custom?—No.

8486. Does the same thing hold in the case of brandy?—We are not blending brandy in bond at present at all.

8487. You supply brandy, do you not?—We do.

8488. Would that go direct from bond as received from abroad to your customers?—In certain cases. Very likely if it was going in the country it would go under bond to the larger customers; to the smaller men it would go to a rectifying house and be distributed from there.

8489. Might it not be blended there with grain spirit?—No, we never do.

8490. You are aware of the fact that at all events two or three years ago, if not more, a good deal of brandy was mixed with spirit other than the juice of the grape?—I do not think it was ever done by the trader—not by the rectifiers or dealers. I do not think so.

8491. Who do you think did it?—The publicans, if it was done.

8492. Does that mean that the publicans themselves bought grain spirit?—They probably bought two or three grades of brandy and blended it.

8493. Could you tell us in your own experience what the cheapest brandy that a London publican would sell is made of?—I cannot tell you what the cheapest is.

8494. (*Mr. J. Y. Buchanan.*) If English grain spirit can be made a constituent of blended Scotch or Irish whiskey, would there be any objection in so far as regards the goodness of the article to the use of foreign grain spirit for the same purpose?—I have no knowledge of foreign grain spirit. I have never used it.

8495. But supposing it is made, as they probably can make it, as good as it is made in this country, would you have any objection to it?—In using it for whiskey, do you mean?

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8496. For blending whiskey?—Certainly not; I think whiskey is a British manufacture. I think it is the general idea of the public that it is a British manufacture.

8497. If legislative restrictions on the mode of manufacture of whiskey in this country were increased, while the only protection against the foreigner remained the equality of the Customs duty with the Excise, would there not be a great probability that such foreign grain spirit would be imported into this country for producing blended whiskies?—I do not think so myself—certainly not at the present time, because there is no foreign spirit free to be imported into this country; they are short abroad.

8498. But if our manufacturers were put under extra restrictions that would increase the price in this country, while the foreigner would have nothing to contend with except the equality of the duty which he would pay to us which would render it cheaper?—I suppose if the Excise increased their restrictions they would give us an increase in the differential duty.

8499. You think that would be only just?—Yes.

8500. Do you export any spirit to the Continent?—Yes.

8501. Then you would pay more duty than the foreign spirit coming into this country. If you export spirits to foreign buyers on the Continent they have, of course, to pay the duty on that spirit when it comes in. Is that on a higher rate than the foreigner has to pay coming into this country as a rule?—Are you referring to the duty itself, or the differential duty abroad?

8502. No, the duty itself?—The duty varies in every country.

8503. Is it generally higher against us than ours against them?—British spirits pay most duty—more than any other country, so I understand.

8504. If we imported grain spirit from abroad to make our spirit we should not get an equivalent in being able to export to them our whiskey for their use. There would be an impediment?—As far as the import or export trade is concerned the question of duty does not come in at all.

8505. I think it is a very important one?—I do not see your point.

8506. My point was this: if we increase the legislative restrictions upon our own distillers, that will necessarily raise the price of the production of our spirit, and if the foreigner is not subject to these restrictions and remains only with the impediment of the present Customs duty, it would be commercially to our disadvantage because it would then be cheaper to import grain spirit than to manufacture it, and I understand that you think that under those circumstances our distillers ought to be protected by a higher Customs duty?—Certainly. I have answered that already.

8507. (*Dr. Cushny.*) Do you believe that when Scotch whiskey is blended with your London spirit it remains Scotch whiskey?—It remains blended Scotch whiskey.

8508. At what percentage would you draw the line? How much can Scotch whiskey be diluted with your London spirit and still remain Scotch whiskey?—I could not tell you that at all. According to the finding of the last Committee they simply describe it as a legal act.

8509. In practice what percentage of London spirit do you add to Scotch whiskey and still call it Scotch whiskey?—We still call it "Blended Scotch Whiskey." We use the word "Blended." On the average, I should say it is 50 per cent.

8510. Supposing you have a grain spirit distilled in Germany in the same method as you use here and as used in Scotland and Ireland too, I do not quite understand why, according to you, that should not be blended with 50 per cent. of malt and called Scotch whiskey?—Simply because I regard whiskey as a British article. That is the only objection I have.

8511. But you know there is American whiskey?—I have seen it made.

8512. So that whiskey is not a purely British product?—I suggested a little while ago a definition of whiskey in these Islands.

8513. But you have whiskey outside these Islands?—Yes.

8514. That is not a logical definition because, as you know, there is whiskey outside these Islands?—I was merely speaking of the British definition of whiskey. Really it is an Excise definition of whiskey which applies only to these Islands.

8515. But the Excise does not recognise whiskey at all?—Not at present.

8516. You suggest it should?—Yes.

8517. And allow any spirit made in this country to be called whiskey practically?—Any corn spirit.

8518. How far would you allow rectified spirit to be used in the making of whiskey?—In the first place it is not suitable for it. I have never heard of its being used.

8519. It might be used?—It might be.

8520. Would you refuse to allow that to be called whiskey?—I think the rectification would take out the bye-products that are necessary to entitle it to the name of whiskey.

8521. You look upon the grain spirit purely as a dilutant in the same sense that water is a dilutant?—Under that last Report I look upon it as a dilutant; but as an article of manufacture from the substances and materials it is made from, and the particular form of manufacture, I regard it as a whiskey.

8522. Under the last Report if you could dilute with grain spirit and could regard the grain whiskey as a dilutant, do you not think you could use the rectified spirit as a dilutant?—Yes, you probably might under that last Report.

8523. Then you would almost have to add to your definition that it must contain a certain amount of malt whiskey?—Not unless you define what malt whiskey is.

8524. Malt whiskey is pot still whiskey?—"Malt whiskey" is too vague a term, and "pot still" is too vague a term.

8525. You use only 50 per cent?—Yes.

8526. Why—if I might ask?—Because it suits the public taste—that is the only reason.

8527. Do you think more grain spirit would spoil the whiskey?—We should use more for a lower class whiskey, but I said 50 per cent. was the average.

8528. I understood you to say 50 per cent. was the lowest?—No, the average.

8529. How low would you go?—We do not exceed 75 per cent.

8530. Then the essential feature in any case is, as I understand, malt whiskey or pot still whiskey?—I do not understand your question.

8531. The essential feature is pot still whiskey, that is to say, you start with pot still whiskey, and you can dilute it with either alcohol or water?—Yes.

8532. Would you not think it is an advantage to the public that they should know how much malt the mixture contains?—I do not think it would be any use at all unless you define what malt is.

8533. Malt whiskey, or pot still whiskey?—Malt whiskey is such a very wide term. Some of the malt whiskies are nearly as plain as grain whiskey, and some are so coarse and heavy that they can hardly be drunk by themselves. It is such a vague term.

8534. You always use 25 per cent. of some malt?—No, we do not. We put some malt whiskies into a blend by themselves—we simply blend them together.

8535. But you never go below 25 per cent. of malt and call it whiskey?—No.

8536. Would it be advisable that the public should know that they have 25 per cent. of malt?—I do not think it would do any good at all.

8537. Do you think it would do any harm?—I think it would lead to malt whiskies being made plainer in themselves—that is all.

8538. You mean being distilled plainer?—Yes.

8539. Would you explain that?—There were certain Scotch whiskies that I remember about 20 years ago. When the demand for plainer whiskies was coming into vogue they changed their makes and produced a whiskey with less bye-products, less flavour, less aroma, and still sold it under their old names simply because they found that their former make was too accentuated and too strong to get a market. If you rule out all grain spirit to-day the pot still makers

would simply produce an article very similar to what is sold at the present moment.

8540. That is not exactly what I wanted to get from you. You stated if it was insisted that the name "whiskey" should only be applied to a thing that contained at least 25 per cent. of the pot still whiskey, it would result in the malt whiskey becoming plainer. I do not understand that?—So as to make a plain enough blend.

8541. Do you mean to say that anyone wants a plainer blend than 25 per cent. of malt?—I do not give 25 per cent. as the limit, but I think it is quite conceivable.

8542. You think some people would prefer it a little plainer?—People like all their food and drinks now-a-days drier or plainer than they used to thirty years ago. They like drier champagnes, and they do not like sugar with their tea, and they like lighter beers, and they like a lighter whiskey. It is a matter of public taste.

8543. The question is whether anyone wants a plainer thing than 25 per cent. of malt and 75 per cent. of grain?—I think that some of these extremely strong malt whiskies, even with 75 per cent. of grain, can be found too strong.

8544. What is the Irish and Scotch whiskey sent to London to do? You mentioned that Irish and Scotch whiskey was coming to London?—Grain whiskey.

8545. What is that for?—Some of it is going to the chemists, and some of it is going to the rectifier.

8546. Does it go to the chemist direct?—Yes.

8547. From Scotland and Ireland?—Yes.

8548. What does he do with it?—I do not know. He probably uses it for a solvent in his manufactures.

8549. You mean without any rectification?—Yes.

8550. He does not rectify his grain spirit before using it?—The chemist may not rectify. I am talking of manufacturing chemists.

8551. I notice that you propose a certain number of discriminations between foreign spirits, that they are to be separately labelled, and so on. Do you think it would be impossible to separate good blends from bad blends in the same way?—I think it is absolutely impossible to do so.

8552. Do you think it is possible to carry out this discrimination that you advise?—That is merely an Excise permit, and would make the identification in bond more easy. That is why I suggested it, and then if any rectifier or trader was buying spirit and he suddenly received a permit of a different colour he would know it was manufactured from a different material. It would be a safeguard to the purchasers, the dealers, the persons who buy from bond.

8553. Do you think there is anything in limiting blends in the same way, having a separate class for blends of 50 per cent. of grain whiskey, for example?—I do not think it would do any good at all.

8554. Would it not do as much good as this discrimination you propose?—What I propose is merely a discrimination between spirits made from corn and spirits made from other materials.

8555. And foreign spirits?—And foreign spirits, because foreign spirits have a different duty. That is why I suggested that.

8556. There is no commercial difference between those different spirits, is there?—No, I do not think there is.

8557. Dr. Adeney asked me to ask you whether 50 per cent. of Irish pot still whiskey, plus 50 per cent. of your London grain spirit would be Irish whiskey?—It would be blended Irish whiskey.

8558. Of course, the "Blended" goes as far as the publican, and no further I suppose?—I cannot answer for the publicans.

8559. (*Dr. Bradford.*) I think I understood you to say that you supplied a certain amount of spirits to chemists?—Yes.

8560. Is that grain spirit?—Grain spirit entirely.

8561. Is it entirely similar to the grain spirit that you use for blending?—The same thing.

8562. Precisely the same thing?—Yes.

8563. When you use the word "chemists" you mean manufacturing chemists?—Yes.

8564. You told Dr. Cushny you do not know for what purpose it is used?—No. I think it is as a solvent in the same way that they use fusel oil, and some of them use methylated spirit for some of their preparations.

8565. This grain spirit is what some of the witnesses before us would think might be called grain whiskey, is it not?—Yes. I think an Irishman or a Scotchman would call it grain whiskey.

8566. It is in many senses of the word a rectified spirit?—It is in an advanced stage of rectification, but it is not rectified spirit which we might class as rectified spirit.

8567. But it is precisely the same spirit as is used for blending with Scotch whiskey which is then sold as blended Scotch whiskey?—Yes.

8568. You cannot help the Commission at all by telling them what this spirit is used for by chemists?—No, I really do not know.

8569. Do you know whether it is used for the preparation of medicines, tinctures and things of that kind?—I should think so, but I really do not know, and I have no right to speak.

8570. With regard to these different percentages in your different blends of Scotch and Irish whiskey, are these different percentages to meet different tastes on the part of the public?—Yes, it is entirely taste. At one time twenty years ago we did not use any grain spirit for blending, and we found we were losing our trade.

8571. I presume it is also a question of price?—No, it is not.

8572. Is it purely a question of the taste of the public?—As regards the question of taste it simply enables an older pot still whiskey to be used with it.

8573. (*Mr. Guillemard.*) There are one or two questions I wish to ask you about the blending in bond of foreign and British spirits for export. I want to make my attitude plain. An Exciseman speaking to a distiller is naturally suspected, but I want to understand the position not of a section of the trade but of the whole of the trade. I have a feeling from the evidence given by two or three trade witnesses, including yourself, that there is a certain amount of misunderstanding on the matter. There are certain things allowed now to be done to spirits in bond for exportation which are not allowed to be done to spirits in bond for home consumption. The reason for that distinction is in every case a Revenue reason—that is to say, that if the things were allowed to be done in bond in the case of spirits for home consumption there would be trouble with the Revenue. When it is done for export there is none. That is the reason for the thing being allowed in one case and not in the other. That is the first point. The second point is that this blending of British and foreign spirits for export was originally allowed at the request of the trade; the Excise had no interest in it, but it was allowed at the request of the trade. The Excise is perfectly indifferent as to whether it is allowed to go on or is stopped. It is nothing whatever to them. The point I want to get at is whether the trade as a whole wish it to go on. Now, several witnesses, including Sir Robert Usher, who made a good deal of it in his evidence, have asked that this mixing of foreign and British spirits in bond for export should be forbidden. You agree with that view, and you were asked why, and you said because it damages the export trade from this county to America. Can you tell me in what respect you think it is damaged? I may say this as a preface. When the British and the foreign spirits are blended in bond for export they are not allowed to leave bond except under a label that clearly shows that they are a mixture. Do you wish to associate yourself with the request that that no longer should be allowed, and if so, why?—Yes, I do, and because I think that in Australia and in America (I take those as the countries which are most particular as to their imports) it is only right that spirits coming from a British port and coming under the name of a British production should be all British.

8574. They come under the name of mixed spirit. They cannot leave bond under any other name?—I understand that, but that identification is lost on

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landing. The importer abroad would bring it in and send it out to the trade.

8575. That makes rather against the idea that any Excise mark once on the label can track the thing right through to the drinker; but I pass that by. This is what I want to put to you: I thought your objection was going to be that the export trade in spirits to America was damaged (this is the view that several of the trade witnesses have put forward), because it is thought in America that something was supplied to the American drinker which the English law does not allow to be supplied to the British drinker. That is a view largely held in the trade?—I have heard that stated.

8576. Do you hold it?—I hold that there is a good deal in it; decidedly I do.

8577. I think there is a misunderstanding about it. What the Americans wish to stop (I quote from their Act) is the consumption in America of any spirit which is forbidden to be sold in the country from which it is exported or which is restricted in sale. Now in England there is no restriction at all on the sale of a mixture of British and foreign spirits. Anyone can sell them and anyone can mix them outside bond. But they may not be mixed in bond for home consumption?—In bond for home consumption.

8578. Do you think that the American objection is a right one in the light of that fact? I am coming to how it affects your trade later on; but what they want to stop is the supplying to a person to drink in America what may not be sold in this country. They are getting something that may be sold here. How is your trade damaged by that?—I think it would be well to remove the prejudice abroad as far as possible. There is nothing in the whole matter, because in the first place it is not done.

8579. That is exactly the answer I wanted to get from you because I want the trade to understand what they are committing themselves to in the line they are taking. Now this particular thing we are talking about is an instance of many things. There are several other operations which are allowed in respect of spirits for exportation which are not, and could not, be allowed for spirits for home consumption. To make the operations in bond for home consumption and exportation precisely similar (and that is what the Americans are asking for) would mean the withdrawal of a number of privileges which the trade now possess, and which the trade have asked for in the way of preparing spirits in bond for a foreign market. I want to put this to you: If the trade take the line you take about this one point, I do not see how you are going to stop if the Americans press you or press the English Government to make the regulations in bond identical for export and for home consumption; and what I wish the trade to think about is: Is the trade as a whole prepared to take that line, because if they do the Excise would not object; but if they do ask for it I want them to do it with their eyes open. Have you any views on that question?—No; it would take a good deal of thinking over. There are many, many points which are allowed by the Customs that are not allowed by the Excise.

8580. You cannot stop at that one thing?—I quite see that.

8581. Now let me take an instance of what I mean. There is another operation allowed in bond on spirits for export and not allowed for spirits for home consumption, and that is an operation that one or two witnesses have spoken about, and that they have asked may be forbidden. Under the Spirits Act of 1880, Section 69, it is provided: "A distiller or rectifier may add any sweetening or colouring matter or any other ingredient to spirits for export." He is allowed to do that for export because there are no Excise difficulties, but he is not allowed to do that for home consumption?—Not in bond.

8582. No. Now if there is pressure put on the Government by America or by the trade to prohibit that in bond, what would your view be about that? That is merely an instance of one of the things in which the regulations must logically be made uniform if you begin. Have you any idea how the trade as a whole would take any change of that sort? It has been urged on the Commission by several trade witnesses?—It would considerably affect the rectifying trade for export.

8583. Would it affect you personally?—Decidedly. Take sweetened gin, for instance. Gin is very often sweetened in bond before it is bottled for export. Cordials are made in bond by many firms, and other things are done which come under the category of compounding.

8584. You will see that a good many trade witnesses—Mr. Seaman, for instance—urged that this concession should be withdrawn, and I think Sir Robert Usher meant to urge the same thing?—Yes.

8585. I think that both of those witnesses were in favour of it. May I take it that you would be against it?—We would be in favour of it if you except all compounded goods.

8586. But how could you get over the damage to trade in America? America, apparently, is outraged if anything is allowed to be done in bond for exportation that is not allowed for home consumption?—They are simply under a misapprehension. In the case of sweetened gin they quite understand it.

8587. In America?—They perfectly understand it.

8588. I understood from the trade witnesses who have come before us in the last two or three sittings that the reason why they urge the withdrawal of the concession is that their trade is being damaged in America because of this belief. I gathered that that was the American view?—I do not think you could treat all spirits as if they were under one category. I think you must separate compounded and non-compounded spirits.

8589. I did not want to spring the question on you to be answered at once. I have rather used you as a stalking horse because I wanted to bring out what I think is the point at issue. I rather doubt whether the trade as a whole appreciate it, and I want to make it quite clear that the Excise have no interest in the matter of any sort. What I personally wish, and what the Commission wish, is to know the views of the trade as a whole about this matter, and to be quite sure that they are speaking as a whole, because I am not quite clear about it?—Quite so.

8590. There is one other point with regard to your suggestion, that British spirits should be classed according to the materials used in their manufacture, and that different permits should be given. Are you aware that in the past when those different coloured permits were used they did not work very well, and the experience of the Excise was that in some ways they rather made for fraud? Have you any knowledge of that?—No; it is all ancient history, but I have no knowledge of it.

8591. It was about 1861 to 1864. There were special permits used at malt distilleries?—I was not referring so much to the different Scotch permits as to the British permits and the foreign permits being of a different colour. As far as I know they worked successfully. I never heard it hinted that there was any trouble there.

8592. Which permits are those?—Simply the British and foreign.

8593. Yes, there was trouble there too. What was found was this: that there were stringent regulations at that time in force as to mixing the two, but they did get mixed and they did get sold under the wrong denominations. I think our experience was that the public did not get much security from the label. You have no experience of that, have you?—No, it is a long time ago.

8594. (*Chairman.*) As I understand you, there is a blending of spirits, British and foreign, which takes place in bond for exportation?—It is allowed by law, but I do not think it is done. I have never heard of a case.

8595. I thought you were dealing with the evil—that you objected to exportation of this blended spirit in bond?—I was saying that I considered it produced a prejudice abroad.

8596. The mere fact of the permission?—Yes.

8597. May I take it from you that all this is, I will not say sentimental, but theoretic?—I think so at the present moment. I am not aware it is being done at all.

8598. Is not your evidence being given *ex abundanti cautela* to prevent it ever taking place in the future?—Yes.

8599. Why do you expect it will take place in the future if it has not taken place in the past?—It might do if there was a change in the spirit market of the world. If certain countries had an overplus of spirit and we were short in England the spirit would come here.

8600. You think they would dump the spirit on us?—Yes, they have in the past.

8601. You object to that?—Very greatly indeed.

8602. It does not exist at present, so that we are merely discussing in the air this question of the blending in bond?—Yes.

8603. (*Dr. G. S. Buchanan.*) The objections to colouring, mixing and other things which may be allowed for export and not for home purposes which have been taken by the American Government are, as you have told us, and as Mr. Guillemard has helped us to understand, really objections to action which is taken for Excise reasons and originally at the request of certain sections of the trade?—Yes.

8604. But at the same time they can be twisted, or they can be regarded as meaning that it is possible that an inferior spirit is allowed to go out, and can go out legitimately to foreign countries which would not be allowed in the country of origin?—Yes.

8605. Certain of those points seem to have been taken up by the countries concerned, and have been used, as distillers have found, to harass the trade. I do not know if you know it, but have you gathered that the object of these pin pricks, as one may call them, is in the direction of getting from the Government Departments concerned some definition or statement as to what the spirits which are exported abroad consist of?—It is.

8606. One knows the attempts that have been made in the United States and elsewhere to obtain from foreign countries in respect of particular foods official definitions which are guaranteed by the Governments concerned?—Yes.

8607. We never know what the Americans may do under their food laws, but it is quite possible, is it not, that if definitions of spirits were arrived at for home purposes on such points as this Commission is considering, for instance, as to what constituted grain whiskey, blended whiskey, Scotch whiskey, or whatever it may be, and a statement could be provided with spirits going abroad from bond under official sanction saying whether they were in one or other of these broad classes, then all the difficulties and these pin pricks would vanish?—Exactly. It would be a good thing.

8608. (*Chairman.*) The Commissioners are much obliged to you for the information you have given them.

The witness withdrew.

Mr. Alexander Mitchell Cowie, called.

Mr. A. M. Cowie.

8609. (*Chairman.*) I believe you are the proprietor of the Mortlach Distillery, which is situated in the Glenlivet district?—Yes.

8610. Does Glenlivet come within the Speyside District?—Yes.

8611. The Mortlach Distillery was licensed in the year 1823?—That is so, my lord.

8612. Has it always been a pure malt distillery?—Always pure malt.

8613. You represent the North of Scotland Malt Distillers' Association?—I do.

8614. And the evidence you are about to give, as far as you know, represents the opinion of the majority of the Association?—Yes.

8615. There are, I believe, in the Association 42 distilleries?—Yes, my lord.

8616. And the district in which the distilleries are has Aberdeen as its centre?—It extends from Aberdeen north and west.

8617. In that district there are 80 distilleries, and 42 are in the Association?—Yes.

8618. To go back to the history of these distilleries. I believe in former times every farmhouse had its distillery?—Yes.

8619. Not illicit?—Not illicit.

8620. In the same way that there was a great deal of private brewing going on in houses?—Yes.

8621. What sort of apparatus was used in those primitive times?—A very rude apparatus.

8622. Was it like anything that is used now?—They were all pot stills—very small ones.

8623. When did what is termed the Spirit Act come into operation?—1821.

8624. After that time, of course, the law was altered by that Act, and a great deal of smuggling went on?—Yes.

8625. Where, as a rule, were those smuggling operations carried on?—They were carried on at some well which was famous for its water, or in the neighbourhood of some well, or in the farmhouses in the hills mostly.

8626. They were called "bothies"?—Yes.

8627. What became of the product when made?—It was carried over the hills through Glenlivet.

8628. It was not for home consumption entirely?—Not entirely. What was taken south was carried over the hills through Glenlivet to Perthshire, Dundee, and so on.

8629. Then this became a rivalry to the legal distilleries?—Yes.

8630. Did a time come when efforts were made to suppress these illegal distilleries?—Yes.

8631. About when was that?—After the Spirit Act of 1821, I think it was. At that time the Government gave an extra rebate of 1s. 2d. a gallon on all malt whiskies consumed in Scotland. This was continued till 1860.

8632. Did they require that incentive?—I do not think so, my lord, but I think the idea was to get these distilleries to take licences.

8633. It altered entirely the action of the distilleries and the legal distilleries came into operation with licences granted?—Yes.

8634. When did the Glenlivet distilleries attain their reputation?—Since about 1880 there has been a considerably greater demand for the Glenlivet style of whiskey.

8635. I understand that, in the first instance, all these makes of whiskey were pot still and malt?—Entirely.

8636. You have seen and heard of a change taking place?—Yes.

8637. I suppose you trace that change, to a great extent, to the patent still which existed before 1831, but it was emphasised by the patent still of Coffey in 1831?—Yes.

8638. I do not know that we need go into it unless the members of the Commission wish it, but you know the history, do you not, of the two or three principal patents which existed before 1831?—Yes, the Stein patent still and others

8639. In the Highland distilleries malt alone is used, I think?—Yes.

8640. How do you designate the Highland distilleries?—I consider the Highlands divided from the Lowlands by a line drawn through the great glen of Strathmore, from Stonehaven to the Mull of Kintyre.

8641. That is, from east to west?—Yes.

8642. In that district in the Highlands you do get still pure malt?—Yes, entirely.

8643. But in the other parts of Scotland what do you get?—You get patent still whiskey. I can produce a map showing the number of distilleries above this line. (*Producing a map and explaining same to the Commission.*)

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8644. Is that line an arbitrary line?—You will find it, my lord, in the Encyclopædia Britannica, under "Scotland."

8645. Does it divide the Highlands from the Lowlands for whiskey purposes only?—No. If you read the article on Scotland, the writer says that the Highlands of Scotland are in a line from Stonehaven down to the Mull of Kintyre, but he says there are Highlands in the Lowlands and Lowlands in the Highlands.

8646. I will not trouble you with the proportion that is made now of pot still and patent still, but Scotland produces both?—It does.

8647. You are speaking now more of the Highland malt?—Yes.

8648. You sell, I suppose, your produce to the dealers as pure whiskey?—Yes.

8649. Unblended?—Yes.

8650. But you sell to the blenders?—We do.

8651. At present who are your largest customers?—The blenders are the largest.

8652. Considerably the largest?—Considerably the largest.

8653. From your communications with the trade, and also with the public to a certain extent, what is your view as to the estimation in which the blended whiskey is held both by the trade and the public?—Do you mean as distinguished from the patent still or the pure malt?

8654. No, I take it as the blending trade is going on now—is it held to be a beneficial trade?—Yes.

8655. Both to the trader and to the public?—Yes.

8656. Both as to health and as to the less injury in the direction of intoxication?—That I could not say. I do not think there is any difference between the effect of a blended whiskey or a pure malt whiskey or a grain whiskey, provided it is the same strength.

8657. I will not ask you to give a character to one or the other, but I thought the blended whiskey would be less pungent and would have mellower and milder qualities?—I do not know that, my lord. If the other is very old I think it is quite as mild.

8658. The Highland whiskies are sub-divided into classifications? — Yes, Campbeltowns, Glenlivets, Islays and Ross-shire whiskies.

8659. How does the sub-division arise? Is it in the quality?—The quality and the style of the whiskey. There are different types of whiskies, and different styles.

8660. Are these different whiskies blended in the Highlands?—No, but the blenders use all these different whiskies in their blends to produce the article of commerce which is called whiskey.

8661. But when you get a Campbeltown and Glenlivet do they blend with each other?—They are blended with patent still whiskey.

8662. Not with each other?—Not to my knowledge.

8663. They would be blended with the patent still whiskey?—Yes, with the patent still whiskey in proportions.

8664. You do not follow this blending very much yourself, I suppose?—No, I am a distiller.

8665. From what you know is going on in respect of the blending, would anything that interfered with the blending of these different whiskies be injurious both, as you say, to the trade and the public?—I think so, provided a certain fixed quality and character of the blended whiskey is maintained.

8666. Is that the opinion of your Association?—That is the opinion of my Association.

8667. I suppose the blend has come into existence to the extent to which it now exists by virtue of the public demand representing public taste?—That is so, that is to say, a good class blend.

8668. I believe you think it advisable there should be no classification of your whiskey as British plain spirit, but you wish to retain the name "Highland malt whiskey"?—Yes, we ask that there should be a distinct permit granted for our product—Highland malt whiskey.

8669. That would be granted by the Excise?—Yes.

8670. What would become of that permit so far as the effect on the public is concerned?—Supposing the public wanted a malt whiskey and got it from a dealer he would have to give them that permit. He would not be allowed to introduce any other spirit into it.

8671. The permit, as I understand, would be with the Excise officers. There would be a notice on the casks, for instance?—Yes.

8672. Then that whiskey gets into bottles and gets over the bar of a public house. What becomes of the permit?—Whoever buys the whiskey would have the permit.

8673. Now you are speaking of the trader?—Yes.

8674. That is from the distillery?—Yes.

8675. Then there is an end of the permit?—The permit goes with the consignment.

8676. And there it ends? The public would never see or hear anything of that permit?—If they knew there was a different coloured permit going with malt whiskey they would know they were getting malt whiskey.

8677. You would not find it in the bottom of the glass. I am speaking now of the interests of the public. On leaving the distillers' hands and getting into the hands of the merchant and blender, whoever he may be, surely the effect of the permit would end?—Supposing there was a case like this: a publican gets certain stock into his place and he is asked what it is. He says he does not know; he buys it from a certain wholesale house. If he asked for malt whiskey and got a different coloured permit he would then know he was getting malt whiskey, that is to say, from bond. This man is held responsible by the public health authorities for what he sells, and supposing he was asked for malt whiskey, and he does not know what his whiskey is, he had nothing to guarantee it, but if he had a different permit, he would then know what he had.

8678. I do not think that you are generous enough in your care for others. Do you think the patent still whiskey should have a permit as well?—Yes, it has to have a permit.

8679. Supposing one hundred gallons of pot still whiskey goes and one hundred gallons of patent still whiskey goes with their permits and their blendings. What is to become of the permits?—You would have a different permit for blended whiskey.

8680. Who is to give that?—The Excise.

8681. Would the Excise follow into the blenders and be able to give the permits?—They go under bond.

8682. But I am dealing with the outside blending?—You mean duty-paid blending.

8683. Yes?—The Excise can follow that if they like. They have the power to do so under the law.

8684. Surely it is a very great duty to cast upon the Excise to see what blending is going on?—I think if there is any extra revenue to be collected the Excise would undertake it at once.

8685. (*Mr. Guillemard.*) Would the trade welcome the Excisemen going into the interior of their houses more than they do at present?—I think the time has come when the Revenue Department should consider John Bull's stomach as well as his pocket.

8686. (*Chairman.*) But supposing you have a blend of 90 per cent. patent still and 10 per cent. of malt, what should be the permit for that?—According to my ideas that ought to be sold as patent still blended whiskey.

8687. Would you make any variation in your permit according to the blends?—No, I would have a certain minimum of malt whiskey in a blend.

8688. Would you take it at 25 per cent.?—It must be arbitrary.

8689. Would you have the permit state the fact of blending 50 per cent. of each?—If it was 50 per cent. of each, or whatever minimum proportion of pot still malt was arranged as adequate flavouring for the silent spirit, I would have that called Scotch whiskey.

8690. If you are right in saying 90 per cent. is to be treated as patent still whiskey you would have a series of permits. You would have a permit from the patent still distiller, and then when it is blended you would have another permit from the retailer?—That would be so, according to my view.

8691. But the Excise officer would have to look at it because the blender would have to know what he was getting for his blend. Is not that a little inquisitorial?—I was looking at it from the position of being under bond.

8692. You have to deal with the effect of it outside bond?—Precisely, but that is a very small percentage. I am not a blender myself, but I understand it is very small.

8693. As Mr. Guillemard suggests, if the Excise Department made it very uncomfortable in bond you would get a great deal more outside bond. At any rate, you are in favour of this system of permits?—Yes.

8694. You have had some correspondence with Somerset House lately on that question, and if you have no objection I would like to postpone that until Mr. Guillemard examines you?—Very well, my lord.

8695. You are representing here the malt distillers?—I am.

8696. But you are anxious to say that there is no antagonism between the malt distillers and the grain distillers, at least on your part, so long as the grain distillers' product is kept in proper proportions?—That is so.

8697. What do you, on the part of your Association, say is, in your opinion, a proper proportion?—That has never been decided.

8698. But have you not made offers?—We have made offers of 50 per cent.

8699. But supposing the offer had been accepted, what do you say would have been the result? Do you mean that on the basis of 50 per cent. you all agree that should be called Scotch whiskey?—Yes, the Scotch whiskey of commerce was to be 50 per cent. of malt and 50 per cent. of grain.

8700. Supposing it was 75 per cent. of grain and 25 per cent. of malt, or 80 per cent. of grain and 20 per cent. of malt, do you wish that prohibited from being blended?—Not from being blended, but it should not be sold as Scotch whiskey.

8701. Was there any suggestion made of any substituted name?—It would be blended whiskey.

8702. It was the word "Scotch" you objected to?—Yes; we wished to maintain the asset of "Scotch whiskey."

8703. It is allowed to be Scotch whiskey if you blend 50 per cent. of Scotch patent still spirit and 50 per cent. of Scotch pot still whiskey, but if you blend 75 per cent. of Scotch patent still spirit and 25 per cent. of malt? It is all "Scotch"?—My point is, what does the man in the street expect to get when he asks for "Scotch whiskey"? He expects to get a blend of malt and grain, but at what point should the dilution stop with the grain?

8704. I quite see you think 50 per cent. Why do you fix on 50 per cent? Is it because you think it better for health?—Scotch whiskey I consider is an article which originally was all pot still, and the Scotch whiskey we consider should have the characteristic of that article.

8705. Is that in the interests of the trade, or is it still further in the interests of sentiment, or is it in the interests of the consuming public?—It is in the interests of the consuming public.

8706. Why?—That they should get a fairly decent article when they ask for it.

8707. When you say a fairly decent article what do you mean?—I mean to say a good article—get value for their money.

8708. In what does the value consist?—The pot still whiskey costs much more than the patent still.

8709. Supposing the trader is an honest trader selling to the public, if the proportion of the patent still is large he sells cheaply to the poor man. I do not understand you to say there is anything injurious in the cheaper whiskies?—No, provided they have age.

8710. That is another point. Then it comes to this, that, really and truly, you think it is but fair and just that there should be knowledge conveyed to the public?—Yes.

8711. But I do not see for that reason why the 50 per cent. comes in. It is an arbitrary rule that it shall only be called "Scotch" if it has 50 per cent. of malt in it?—That we should leave to the Commission.

8712. As being a task easy to fulfil, and with no difficulties in it. However, I think I see what you mean. Now you say, and it is important, that patent still whiskey cheapens the price of a blend to the merchant?—Yes.

8713. And it enables him, of course, to use your products more than probably they would be used if they were taken pure—at least for the English taste?—Yes, with greater age.

8714. Now a few questions about the price. Do you think that in all cases where the blender is sending to the merchant the merchant is informed of the percentage of the blend?—I think not; but I am not a blender.

8715. What is to prevent, I do not say a dishonest person, but a careless merchant receiving this blend and never being told at all what is the percentage of the blend? If you say you really do not know I will not trouble you, but is it the practice of the merchant to say to the blender: "I have to base my price on what is the blend of this product"?—I expect so, but I really do not know.

8716. Would the price itself tell the merchant more or less the proportion?—It should be some indication.

8717. Do you know at all what is the practical range between different descriptions of blend as to price?—I think there are blends coming as low as 1s. 10d., or to any price you like, up to 15s.—that is in bond—and I believe there are even cheaper ones than that.

8718. As you say in your *précis* you consider the blenders are your best friends?—Yes, they have advertised Scotch whiskey all over the world.

8719. Of course, this includes wholesale merchants who mix themselves different classes of malts together with a proportion of the patent still?—Yes.

8720. Which, of course, has the effect, as you have told us already, of diluting the flavour, and produces a palatable whiskey?—Yes, that is so.

8721. Do you find that the pure malt whiskey is still drunk in certain districts of Scotland to any extent?—Yes, my lord.

8722. More than, say, in the case of the Lowlands or in England?—Yes.

8723. Is that because of the climate?—The climate suits it better.

8724. More exercise and fresher air?—Yes.

8725. I suppose certain distilleries get a certain reputation?—Yes, but still there is a certain amount used in England too.

8726. Has your attention been called to the fact that there is really a pretended blend by putting in a very small quantity of the pot still and then calling it a blend?—Yes.

8727. What sort of commodity does that produce?—It is mawkish and flavourless stuff.

8728. Surely that would remedy itself, because the public taste would stop that?—Provided there was free trade.

8729. Are you touching now the subject of tied houses?—I do not want to touch upon that point.

8730. Do you know anything about them?—No, I am not in touch with them.

8731. Take the temperance point of view. What do you say is the effect of a man getting a better whiskey compared to an inferior commodity?—I think a flavoured spirit would be more satisfying to him as a beverage. It would be more satisfying to his thirst than if he got a flavourless spirit.

8732. You have nothing to say as to the intoxicating qualities?—I think from that point of view that, as alcohol, they are equal.

8733. What produces the greatest thirst, according to you?—I think the patent still spirit produces thirst.

8734. It makes a man go on drinking?—Yes.

8735. You say it is mawkish?—Mawkish and flavourless.

8736. There are some questions that you wish to refer to with regard to the evidence of Mr. Ross and Mr. Drysdale. I do not think it would assist us very much to show there have been different views

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entertained by different persons at different times?—The views entertained then are quite different to those entertained now.

8737. There are people in this world who improve and increase their knowledge, but will you just state generally what is the difference you wish to point out?—At the time I refer to, 1891, there was no claim that patent still whiskey should be called whiskey *per se*, but that it was blended with pot still malt whiskey, and that that was Scotch whiskey, whereas now we are confronted with the position that patent still whiskey should be called Scotch whiskey.

8738. Was it Mr. Drysdale who gave his opinion in 1891?—Yes, he was then Managing Director of the Distillers' Company.

8739. Blending has gone on a great deal since 1891?—Yes, but blending was going on then.

8740. Your point is that in 1891 Mr. Drysdale, who represented the Distillers' Company, took a different view?—He put forward the view that it was used as a blending dilufant.

8741. And now Mr. Ross represents the same Association?—Yes; and he says it should be called Scotch whiskey without any admixture of malt.

8742. You wish particularly to call attention to the fact that the Distillers' Company have advertised and pushed their Cambus Whiskey, "without a headache in a gallon." I do not see the meaning of that?—The inference is that the other whiskey gives a headache. That was put in the advertisement.

8743. You say the Distillers' Company have for two and a half years advertised and pushed their Cambus Whiskey "without a headache in a gallon." Is the Cambus Whiskey patent still whiskey?—Yes.

8744. I do not see what inference you draw from that fact, if it be a fact?—That was put in their advertisement, but the public did not seem to like it; they seemed to accept the other whiskey with a headache thrown in.

8745. Then probably the public took the blended whiskey instead of the pure Cambus?—Yes, my lord.

8746. Was any alteration made with regard to this patent still whiskey after the Islington case?—Yes, before the Islington case they advertised it as patent still spirit, and after the Islington case they gave it the name of "whiskey."

8747. "Whiskey" without the "Scotch"?—Yes. I can produce the advertisements, if you would like to compare them.

8748. Your point is, as I understand, you do not object to the words "Scotch whiskey" if the proportion of the blend is sufficient?—Sufficient proportion of pot still malt to give it the character of Scotch whiskey.

8749. That comes to this, that you say the pot still whiskey is Scotch whiskey and patent still is not?—Not *per se*.

8750. Not unblended?—Not unblended.

8751. But your pot still whiskey unblended is Scotch?—Yes, it always has been.

8752. What do you say as to the ageing of spirits in bond?—I consider that it would be to the advantage of the whole trade if spirit was aged. It does not make very much difference to the malt distillers, because their product is not used under an average of about five or six years old.

8753. Is that so that you would say, without legislation, and without interference, from the nature of your product, that it should not get consumed for five or six years?—That is malt whiskey, but the patent still goes in largely to consumption much younger.

8754. Would you impose any obligation for this ageing, such as detention in bond, or would you leave it to the public taste?—The trade, taking it all round, are of opinion that it would be a great advantage, and give the public more confidence if they knew they were getting spirit of age in the blends.

8755. Is your malt spirit objectionable to the palate, and therefore little consumed, unless it has this age that you speak of?—Certainly.

8756. In what way does it show itself? Is it fiery?—No; when it is new it is quite pleasant—sweet. After a week or two it develops a peculiar sort of nasty flavour and smell. Then it goes through a process of refining, and comes out a fine old malt whiskey.

8757. Take the first six months. Could you recommend a customer to take that whiskey and drink it during the first six months?—No.

8758. You say it is pleasant?—It is pleasant when it is got absolutely hot from the still, and it is sweet.

8759. Is it drinkable?—It is drinkable then.

8760-1. How long does that period continue?—Only about a week.

8762. When you say it is drinkable at the end of five or six years, how long will that whiskey continue to improve?—It will depend entirely on the body it has to begin with.

8763. The same as wine?—Yes. If it is a very rich, sweet whiskey, it would take longer to mature, the same as a vintage port. If it is a thin whiskey it will take a shorter time.

8764. You have suggested five or six years was the time you allowed for it to become perfectly drinkable. After that time does it go on improving or not?—It goes on improving up to fifteen years, in my opinion.

8765. How long would it continue to improve if put in bottles?—Then it gets a bottle flavour after that, but it will not improve in the same way after it is bottled.

8766. I have seen advertisements of sales of whiskey of extraordinary age. How long would bottled Glenlivet keep?—It would keep if properly corked and sealed and there was no action of the air; it would not deteriorate then.

8767. It would keep for a long time?—For a long time. Of course, like every other thing, corks and things go wrong.

8768. On the whole, I understand you to recommend that there should be some legislative definition of bonded whiskey?—Yes.

8769. You do not put the same period of time for the patent still?—I think if there is any legislation it should be the same for both. I am a malt distiller of a high flavoured whiskey, a thick type of whiskey, but there are malt distillers who make thin spirit, and it would not be fair to put us under different conditions from the patent still product.

8770. Is not that rather hard upon the patent still manufacturer if his product does not want the same time, that he should have the same time imposed upon him?—He is quite content.

8771. Surely there is a loss of capital?—No.

8772. Why?—It pays him to keep it. He gets rent for it.

8773. But the man who wants to sell it I am referring to?—You mean the merchant?

8774. Yes?—He also gets more for it.

8775. But surely if it does not improve it in the same proportion as it does improve the pot still, ought he to get more for it?—He does.

8776. That is hard on the public, because they do not get any better patent still spirit for the keeping?—Oh, yes, it improves.

8777. Some say six years for one and three for the other?—Three years for both would be all right, I should think.

8778. That is a matter of degree of time, but you do think pot still requires more time to come to its best than the patent still?—Yes.

8779. How would you define Scotch whiskey?—I define Scotch whiskey as a spirit made in Scotland, which contains a mixture of malt and grain whiskey in such proportions that the whiskey has the characteristics which belong to pot still malt whiskey.

8780. That scarcely includes pure malt, does it?—Oh, yes.

8781. You are now giving us a definition. Pure malt, at any rate, is Scotch whiskey?—Yes.

8782. Do you draw anything in favour of Highland Scotch whiskey as against Lowland Scotch whiskey?—Yes, we should consider it finer.

8783. Why?—There is more aroma and bouquet.

8784. But you would not confine the term "Scotch whiskey" to Highland whiskey?—No. I say Scotch whiskey is a spirit which has the characteristics.

8785. But in the main, what is "Scotch whiskey" to be applied to? Would you apply it to any grain other than malt?—Yes, a mixture of pot and patent still whiskey is Scotch whiskey of commerce.

8786. When you say a mixture of pot and patent still that looks like blended whiskey?—Yes.

8787. But going to the manufacture first before we get to any blend, would you allow the term "Scotch whiskey" to be applied when you have grain other than barley and malt?—No, not by itself.

8788. Then if ever so small a quantity of any grain or maize, you would at once say that should not be called Scotch whiskey?—Not unless mixed with malt whiskey.

8789. That is a blend?—The pure Scotch whiskey is no doubt pot still whiskey originally.

8790. I am now on the ingredients. You wish to confine it to malt only?—Yes, and to a blend of malt and grain.

8791. You get away from what is the manufacture. That is the blend of two whiskies. I want to keep you to the making and the ingredients. You would allow some ingredients to be used in making Scotch whiskey other than malt?—Yes.

8792. What would you have?—The ingredients which are used to make patent still whiskey.

8793. What are they?—I believe maize and rye, but I am not a patent distiller.

8794. Then so far you would allow those ingredients to be used, and would you allow the product to be called Scotch whiskey?—No, not unless it is mixed with pure pot still malt whiskey. I quite acknowledge my position is not a logical one, but that has come to be the whiskey of commerce, and the blenders say they are the men who make it.

8795. You say your position is not a logical one?—Yes. Any definition of Scotch whiskey must be arbitrary.

8796. This patent still whiskey is made of other things than malt?—Certainly. It is no use making it of malt, because the patent still removes all the malt flavour, and as good an article can be got from cheaper materials.

8797. You do not object to it being made and sold, but you want it to be clearly and distinctly marked from the Scotch whiskey which, according to you, must have malt in it?—Yes, that is my position.

(Adjourned for a short time.)

8798. (*Dr. Bradford.*) I wanted to ask you if you could give us any evidence as to whether there is any difference in the action of pot still whiskey and patent still whiskey?—That is a very difficult question. You mean pure pot still whiskey, and pure patent still whiskey.

8799. Yes. We have had some evidence on the medical side given to us tending to show that there was some difference in the action, and I wanted to ask you whether you have anything to say with reference to that?—I think there is a big field there for inquiry as to what the action is. I have heard it stated that there is a different active principle in pot still whiskey and in patent still whiskey. I think it is admitted that in patent still whiskey there is no furfural, and whether there is an active principle in patent still whiskey different from pure malt or not I am not prepared to say.

8800. I am asking you as regards its use medicinally. Would you think there is any great difference in the action of the two?—Most distinctly.

8801. You think there is?—Yes.

8802. Would you kindly tell us in what way?—I think pot still whiskey has more of the nature of a brandy, and if a medical man orders Scotch whiskey, he wants, at any rate, a fair proportion of pot still whiskey.

8803. Do you think medical men are in the habit of ordering Scotch whiskey, as distinguished from simply ordering whiskey?—They order Scotch whiskey.

8804. To what do you attribute the difference, if any, in the action?—To the active principles in the Scotch whiskey, the same as in brandy.

8805. You mean the bye products?—Yes.

8806. We have had it suggested to us by a former witness that the absorption by the stomach is more rapid in one case than in the other. Do you think that is so?—I should say so. You mean that the purer alcohol is more rapidly absorbed.

8807. That is not quite my point. My point is whether the absorption of pot still whiskey is more rapid than the absorption of patent still whiskey?—I think the reverse.

8808. Why do you think that?—You mean the active principles?

8809. I was talking of the absorption of the whiskey as such?—I do not exactly follow your point.

8810. The point that was put to us before was that, if pot still whiskey was ordered for a patient, the effects of the dose ordered would be produced much more rapidly than if patent still whiskey was given?—The alcohol would be absorbed at the same rate, but the whole difference would be in the bye-products.

8811. You think there is a notable difference in the action of the two?—Yes, certainly.

8812. Now, as regards the production of intoxication by the two varieties of whiskey. What do you think about that?—I do not see that there should be any difference, because it is the alcoholic strength.

8813. It depends on the alcohol rather than on the bye-products?—Yes.

8814. And therefore if the alcoholic strength of the two were the same the effects would be much the same?—Precisely.

8815. Then with reference to the reported injurious action of freshly-distilled spirit, or new spirit, what have you to tell us with reference to that?—There is no doubt that there is a great change takes place in whiskey in the course of maturation. There is no doubt there are ethers or some product that goes off in the wood, and that a distinct change takes place. That new pot still whiskey is injurious I would not say. I have no experience of patent still whiskey. I have seen men at these distilleries live to be very old men, and they have drunk this whiskey all their lives.

8816. Have you seen any disastrous results anywhere to people from drinking new whiskey?—No, I could not say that at the distilleries I have seen it.

8817. You have seen instances of individuals who have been in the habit of drinking new whiskey who have lived to an extreme old age?—Yes.

8818. (*Dr. Adency.*) I see in your *précis* you refer to a detail with reference to the manufacture of pot still whiskey concerning which we have had some evidence. It is the effect of heating by direct fire?—Yes.

8819. Do you associate any special peculiarity with that?—I think that the essential flavours of the whiskey are got in that way by the treatment of the wash which produces this burnt ale.

8820. You consider that a very important detail in the process?—Yes.

8821. You would object to heating by steam pipes, or anything of that kind?—Yes.

8822. Have you seen any results from heating with steam pipes?—I have seen whiskey made from heating with steam pipes; in fact, in the Lowland Distilleries they do that largely. In the Highland malt distilleries almost without exception it is all by direct fire. In the North our coals cost us a very large sum, that is to say, just now we are paying something like 23s. a ton for lump coal, and it would be much cheaper to heat by steam jacket or steam pipes, but we do not think we should get the same results.

8823. You are prepared to incur an increased expense to get better results?—Yes, we think our product would suffer if we did not.

8824. The product obtained by heating with steam you say, has not that decided flavour?—Certainly not.

8825. You say that it has not that decided flavour. That you have found from your own personal observation?—Yes.

8826. I notice you say there are no line arms used with Scotch pot stills?—No.

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8827. Are there any rectifiers used?—Yes, there are some. There are the return pipes with cylinders in the still such as you saw when you visited the North. They have those at several distilleries. I think you saw most of them as far as my knowledge goes, but there is no analyser, so far as I know. The fact of the matter is that in making Highland malt whiskey we like to get the steam condensed as soon as possible.

8828. I see you would like to restrict the name of Scotch whiskey to a blend containing not less than 50 per cent. of malt?—Some fixed percentage.

8829. Some considerable percentage we may say?—Yes.

8830. Would you associate with that definition any limit of age?—Yes, certainly.

8831. That you think necessary?—Yes, certainly.

8832. It has been suggested that that would not be a real protection to you, because cheap blends—inferior blends could be made with considerable quantities of malt. Do you agree with that?—No. As Highland malt distillers we think we could take our chance there—that our whiskey would be so much superior that the cheap malts would not be used.

8833. I see you really base your idea of the value of Scotch whiskey upon flavour?—That is so.

8834. So that you take up a similar position to the Irish pot still distillers?—Yes.

8835. You would not be content with any limiting description according to geographical position?—No.

8836. How would you designate a blend of Scotch malt and patent still whiskey containing too low a proportion of malt to warrant it being called a Scotch whiskey?—I would call it blended grain whiskey.

8837. It has been suggested to us that two terms might be used for a blend containing a considerable quantity, say that 50 per cent. and upwards of malt should be called a blend of Scotch malt and grain whiskey, and blends containing the larger proportion of patent still should be called grain and malt?—That might be done.

8838. Do you think that would give protection? Do you think that an advisable thing?—The great difficulty about such a proposition as that is that you would not differentiate between a very large proportion of malt, say 30 or 40 per cent., or whatever it was, and one with 5 per cent. of malt.

8839. With regard to the legal limit of age, we have had evidence that to produce good blends you want an old patent still whiskey as well as old pot still whiskey?—That is so.

8840. So that for the better classes of spirits it would not be a prejudice to the patent still distillers to have to age their spirits?—No.

8841. I see you make a statement in your *précis* that the cheap blends bring discredit to Scotch whiskey?—That is so.

8842. Have you any suggestion to make as to how you might be protected from that discredit?—If a certain proportion of malt which was considered sufficient to give it the character of Scotch whiskey were diluted with patent still whiskey—looking upon patent still whiskey as a dilutant the same as water—then I think that we would have protection.

8843. But I gather from you that the flavour would really be the last test, and that you would be inclined to depend upon flavour?—Yes, that is the whole asset.

8844. You made the statement that the Inland Revenue could follow whiskey to the consumer if they liked under the present Act?—That is so.

8845. Could you tell us how?—The Inland Revenue at present have the right to enter any licensed premises and to investigate and take the stock if they want to. All the whiskey has to be moved by permit into any licensed premises.

8846. Now as to the effect of new pot still whiskies, I take it the evidence seems to be conclusive that if the spirit is a wholesome and good spirit, so far as the experience of the distillers goes, the new spirit does not have a bad effect upon those engaged in the distilleries?—That is the brand new spirit, but when it gets to six months old or a few months old it is very difficult to digest.

8847. You know that from experience?—Certainly.

8848. You have observed that yourself?—Certainly.

8849. Sometimes something goes wrong with your spirit and you get an ethery spirit?—Yes.

8850. Have you had any experience of the effect of that upon a consumer?—No, not personally.

8851. (*Dr. G. S. Buchanan.*) Could you get a consumer to try?—I should not think a consumer would try.

8852. (*Dr. Adeney.*) You have no reason to think that such spoilt whiskey with the ethery product in it is sold or gets into the market, and so gets to the consumer?—No, they could not sell the ethery product.

8853. That would be impossible?—Yes, quite impossible.

8854. Then in giving your definitions of whiskey I was not quite clear as to what you meant. In the first instance you spoke about patent still and pot still, but you gave no definition for those. Have you any definition for pot still whiskey?—Pot still whiskey is a whiskey which is made from malted barley in a still heated by direct fire.

8855-6. That is as far as Scotch whiskey is concerned?—Yes.

8857. What definition would you allow for Irish pot still whiskey? Would you exclude raw grains?—No, certainly not. I am not conversant with the Irish method.

8858. I thought you had in your mind, but I did not hear you express it, that you would base the definition of your whiskey in the first instance on the materials used?—No.

8859. Do you agree to that?—No, not to the materials used. I cannot say as whiskey that Scotch whiskey is different from Irish whiskey. The Scotch whiskey of commerce is what I was thinking of when I gave that definition.

8860. What about Scotch grain whiskey? Would your definition there refer to the materials used? Would you give the name of Scotch patent still whiskey to a spirit produced from molasses?—No.

8861. To what extent would you limit it?—I would limit it to cereals.

8862. (*Dr. Cushny.*) Do you recognise malt as the essential in Scotch whiskey?—Yes.

8863. Which may be diluted in two ways, either by the addition of grain——?—Or by the addition of water.

8864. And you think that a certain amount of dilution may be allowed of pot still whiskey and it still remains Scotch whiskey?—Yes.

8865. Would you limit that dilution of Scotch whiskey to Scotch grain?—Yes.

8866. Do you agree with the last witness that foreign spirit might be used?—I think Scotch whiskey should be made in Scotland.

8867. Would you allow grain spirit to be used—must it also be made in Scotland?—That is the view of our Association.

8868. Do you think that pot still can be drunk more diluted than patent still?—I think so, certainly. You get more flavour in the pot still and you can add more water to it than you can to the patent still.

8869. Do you think that is the general feeling that malt whiskey can be diluted more with water than patent still?—Yes.

8870. Do you think that would have any effect on the public health question?—Yes.

8871. It would be more advisable?—Yes, pot still whiskey well diluted.

8872. (*Dr. G. S. Buchanan.*) If what you were telling Dr. Cushny just now can be accepted, that forms an additional reason from the point of view of the consumer why he should know when he purchases whiskey whether he gets a substantial quantity of pot still product or not?—Certainly.

8873. You were telling Dr. Adeney that Lowland malt whiskey is very largely distilled by the aid of steam pipes?—Yes.

8874. Do you know, as a matter of fact?—I do not know as a matter of fact, but I understand that is so.

8875. The impression I gathered from some evidence given here was that exceptionally it was done—at one

or two distilleries only?—I may be wrong. I admit I am not speaking with knowledge.

8876. What you would like, as I understand, is that self malt whiskies, or blends of different malt whiskies, or all malt whiskies blended with not more than 50 per cent. of patent still spirit, should equally be entitled to the name of Scotch whiskey?—That is so.

8877. Under 50 per cent. of pot still product in a blend, it would be Scotch grain whiskey, as you put it—a Scotch grain whiskey blended, or something of that sort?—Yes.

8878. You would not consider it necessary to disallow the use of the word Scotch altogether, provided that the dominant factor of grain was mentioned? I am putting to you now the second case?—Yes.

8879. Do you think it really would greatly matter whether the grain was Irish, Scotch or English grain?—That is a difficult question for me. I am not a blender. My Association say it should be made in Scotland.

8880. Would you subdivide what you think might legitimately be called Scotch whiskey without any qualification? Would you desire, or would it be in the interests of the consumer, to subdivide that in any way—for example, to distinguish between all malt whiskey and a Scotch whiskey blended?—Certainly—Highland malt whiskey, Lowland malt whiskey, and Scotch whiskey.

8881. Would you think it desirable that some sort of definition should be given as to what constitutes Highland malt whiskey?—Yes.

8882. That is the geographical definition that you gave us this morning?—Yes.

8883. Purely geographical, or the fact that it must be pot still whiskey?—It must be pot still whiskey. All Highland whiskey must be pot still whiskey—malt.

8884. I do not know whether it was brought out which are the Highland distilleries which at present send out self whiskies. You do yourself, I think?—Yes.

8885. Is self whiskey from the Mortlach Distillery available to the public in London now?—No, it is not, unless they send direct to the distillery for it.

8886. The same holds for other distilleries in the Highlands?—Yes.

8887. They have a very good reputation, have they not, which is largely based on the self whiskey which they produce?—Quite.

8887*a*. Personally do you consider that your whiskey is improved by blending with grain?—If it was new or young it might do so.

8888. Young is rather an elastic term. What is it—five years?—Four to five years old.

8889. What do you say when it comes to eight to twelve years old?—Then I think it is better alone.

8890. But the public at present—at all events, the London public—for one reason or another are unable easily to get 12-year old self whiskey from the Highlands?—That is so.

8891. Can you tell us how a Highland distiller would be placed with regard to sending out whiskey bottled at the distillery and putting it on the market? He can bottle?—Yes, he gets an indulgence to bottle. He could set up a bottling warehouse.

8892. He has to set up a bottling warehouse?—Yes.

8893. Has that to be distinct from the distillery in any way? Are there any special difficulties with regard to that?—I do not know. I have not got one, but at present he has to get a special licence for that. We are only allowed to send out nine gallons in a cask in the distillery.

8894. You would have to have a special licence for bottling?—I think so.

8895. If you bottle, you would be bottling at the distillery, under the supervision of the Excise?—Yes. The duty-paid whiskey at the distillery is under Excise supervision.

8896. But you would not have the right more than anybody else to state that the whiskey you send out had been bottled at the distillery or bottled in bond?—No.

8897. (*Dr. Adeney.*) Would you like to have that right?—We would like to have that right.

8898. You think it would be a great advantage to you?—Yes, especially for export purposes.

8899. (*Dr. G. S. Buchanan.*) At all events, it would enable, for example, the Londoner who may have by this time very considerable doubts as to the meaning of any description he gets on the label, to be sure that he was getting whiskey from a particular distillery?—Certainly.

8900. You give in your *précis* a calculation with regard to the relative cost of patent and pot still whiskies?—Yes, on page 8.

8901. There is one point I wish to ask you about that. I notice in one case, in the case of the pot still whiskey, you deduct 2½d. for loss in bond; and in the other case, the patent still whiskey, you do not deduct the 2½d.?—12 per cent., I think, is deducted from both.

8902. Is it?—Yes, 1½d. per year. The 2½d. is the difference between the two, the loss in bond on the value of the spirit. I allow for loss in bond an amount equal to 2½d. a gallon.

8903. You mean that it is 2½d. more loss than if it had been patent still spirit?—Yes. Assuming that the consumer gets the same quantity, the 12 per cent., the 2½d. is the difference per gallon.

8904. You tell us on the same page that in the Highland distillery you were using barley which was about 6s. more than 28s.?—Yes, 34s.

8905. That is per 448 lbs., and that also you were using at the time, a few months ago, either Danish, Island or Norfolk barley in addition to the best Morayshire barley?—Yes.

8906. And none of the Black Sea or Danubian?—Yes.

8907. Can you say that for all the distilleries?—For a good many distilleries—the majority.

8908. You tell us at the early part of your *précis* something with regard to the use of peat at the kiln May we take it that peat as a fuel is essential to the drying of all the malts that are used in making Highland whiskey?—Certainly.

8909. You can say that for the whole range?—Yes.

8910. It may be a little more or a little less?—Yes, according to the taste of the distiller.

8911. They all use peat?—Yes.

8912. It is an essential factor in the flavour of Highland whiskey generically?—Certainly.

8913. You cannot say whether that must be extended to Lowland malt distilleries?—Some Lowland malt distilleries, I think, use peat and some do not, according to the whiskey they want to get.

8914. Will you give us the reference to Morewood, which you refer to at the end of page 8 of your *précis*? I do not quite understand that?—Morewood's book was published in 1838, just after the introduction of the Coffey still, and he goes on to describe it in this way: "If, therefore, as is generally supposed, that all bad flavour arises from long and violent exposure of the wash to the action of the fire, this process is calculated to obviate entirely that injurious effect and to obtain a spirit wholly divested of any empyreumatic or disagreeable taste."

8915. What is that applying to?—He is talking about the patent still. He says the patent still takes away all the flavours, and he also, again, in speaking of illicit distillation further on, says: "In making the malt and in the mode of distilling, the flavour is altogether formed. No machinery is employed in the still to keep the liquid from burning, and hence the empyreumatic taste and smell are communicated to the liquor and also to the bagging, as it is called, of oatmeal and hot water." I suppose they did not strain their mash very carefully. He states that on this the reputation of the illicit whiskey depended.

8916. You think the actual caramelising by direct fire heat is an important factor?—Certainly.

8917. In the manufacture of the whiskey it is, as you put it here, a misfortune as far as the pot ale is concerned?—The pot ale is the misfortune—the trouble.

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8918. Does the pot ale, as a matter of fact, give distinct evidence of caramelisation?—Yes; it is pot ale. It is darker in colour.

8919. Is there direct evidence that caramel causes that to take place?—If we did not keep a rummager going in the bottom of the still, the still would burn. It burns on to the bottom.

8920. But you do keep a rummager going?—Yes, but in the smuggling days they did not, and this man says that is the way they got their fine flavours.

8921. I had rather got away from Morewood. You say that you should caramel or burn the wash. I do not quite understand that. As a matter of fact, is there any actual direct contact of the flame with the side of the still?—There is the copper bottom in between—within the copper. Of course, we use a very strong fire for running off the wash.

8922. (*Dr. Horace T. Brown.*) You tell us that the views you have just expressed are those of the majority of the Malt Distillers Association?—Yes.

8923. Is that majority a large one, may I ask?—Yes, I think so—a considerable majority.

8924. Could you give us any idea of the size of the minority?—I could not say. It is difficult to ascertain.

8925. I want to put to you a few questions about the direct fire heat. Do you go so far as to exclude from the category of pot still Scotch whiskies those made in a pot still heated by steam?—That was excluded in the last Committee of 1891. According to the finding it was a direct heated still.

8926. Can you give us the reference to that?—Yes, I will refer you to their report. It is on page 15.

8927. "Whiskey is still chiefly made in pot stills by the application of the heat of a fire to the fermented liquid"; but that is not an exclusive definition?—Then later on there is another, I think. That is on page 4.

8928. "Distillation of spirits. Spirits differ from wines by being obtained through distillation of the fermented liquids. The stills are of three kinds: (1) Pot stills to which fire is applied during the distillation of the fermented liquid called 'wash.' (2) Pot stills heated by fire or steam, used in this country, for rectifying spirits; and abroad, by steam only, for the direct distillation of the fermented liquid." Do you think that excludes the steam-heated pot still?—It seems to according to that.

8929. (*Dr. Adeney.*) You draw that inference?—Yes.

8930. (*Dr. Horace T. Brown.*) I should like to ask you a few questions about that. You maintain that there is a considerable amount of caramelisation goes on?—Yes.

8931. That is probably that the heat at the bottom of your still is greater when you have an open fire than when you have steam boiling by a steam jacket?—Yes.

8932. Are you aware that the same sort of controversy has gone on in breweries as to the efficacy of steam as against open fire boiling, and that whenever experiments have been made by the same brewer, as far as my knowledge goes, there is absolutely no difference to be found in the nature of the product or even in the temperature of the lower part of the copper?—No, I am not aware of that.

8933. I have seen those experiments myself?—I take it from you.

8934. I will go still further, if you please. You would exclude from your definition of Scotch whiskey a pot still whiskey made in a steam-heated still? Is that so?—That is so, but not as a Scotch whiskey. I talked of a Highland whiskey, I think you will find I think you will find I was speaking of the process of making Highland malt whiskey.

8935. (*Dr. Adeney.*) You do not refer to Lowland?—No.

8936. (*Dr. Horace T. Brown.*) Do you consider Scapa whiskey Highland whiskey?—Yes.

8937. Do you know that Scapa is made in a steam-heated pot still?—Yes.

8938. Is Ben Morven a Highland Distillery?—I am not sure where Ben Morven is.

8939. I am informed that the Ben Morven Distillery has steam-heated stills, and also Glenmorangie, which are Highland distilleries?—Yes.

8940. Where they have steam-heated stills?—Yes, those are the only two.

8941. Which are the only two?—Glenmorangie and Scapa.

8942. I will take those two. Would you rule those out—although they are, I believe, whiskies having a distinct Highland flavour—from the category of pot still whiskies?—No. I think the majority use direct fire, and evidently that is the proper method by which it is made.

8943. (*Dr. Adeney.*) You could not rule it out if it had the characteristic flavour, according to your definition?—No.

8944. (*Dr. Horace T. Brown.*) You have told us that in the Highland stills there are no line arms and no fractionating apparatus?—That is so.

8945. Do you not think that some of those purifiers we saw in the Highland distilleries have a fractionating effect?—I think not.

8946. Why are they there?—To keep the stills from coming through foul. That is why they began to use them.

8947. You think they have no fractionating power at all?—There is nothing in them.

8948. Is your general argument to the effect that there is no fractional distillation in the pot still?—In the sense that there is no analyser.

8949. Do you contend that all the bye-products from fermentation come over from the wash ultimately into the whiskey?—In the first distillation they do.

8950. But in the second distillation?—That is differentiated at the end of the worm.

8951. There is some fractionation going on?—There must be, but there is no apparatus in the pot still to fractionate.

8952. I see that you advocate that the pot still whiskey in the blend shall not be less than 50 per cent.?—That is so, but no definite figure has been fixed.

8953. But that is the recommendation of your Association?—No. If you will read my *précis* you will see that, at page 4, it says: "The Highland malt distillers have no objection or antagonism to the grain distillers' products if the latter is kept in proper proportion. Since the question has been acute, our Association consistently offered to agree to a 50 per cent. of malt and grain being recognised as Scotch whiskey. This overture, however, has not met the consideration I think it deserves."

8954. Was that your recommendation?—That is the overture we made.

8955. That is the overture you made—that 50 per cent. of malt should be considered Scotch whiskey, and anything lower than that should not be considered Scotch whiskey?—Yes.

8956. Supposing you take 50 per cent. of Lowland malt at 2s. 6d. a gallon, is that to be put on the same footing as a blend showing 50 per cent. of Highland malt, worth perhaps 5s. a gallon?—It would have to be, according to that.

8957. Now let us take another case. Supposing we have two blends, call them No. 1 and No. 2, No. 1 containing 40 per cent. of Highland malt and 60 per cent. of fine old grain, and No. 2 containing 50 per cent. of a cheap Lowland malt and 50 per cent. of a new and perhaps inferior grain. You see that No. 2, according to your definition, although it is, no doubt, much the inferior article, may be sold as a Scotch whiskey, whereas No. 2 would not be entitled to be called Scotch whiskey at all?—My view of Scotch whiskey is this—that malt pot still whiskey should be allowed to be diluted with a certain arbitrary quantity of grain, but that it should not be so much diluted as to lose the character of Scotch whiskey.

8958. But your Highland malt would surely stand more dilution than your Lowland malt?—That is so.

8959. Can you establish a standard that would be fair to both of those?—That is what we have come here to see about.

8960. Do you think such a limitation as that would be to the public benefit? Take the case I have just

mentioned, where a superior article would not be allowed to be sold as Scotch whiskey at all?—That is rather a difficult point. There is a general feeling that something should be done. I do not think that the better class of drinker needs protection at all, but I think myself that the poor man wants protection. A blend such as you are speaking of, with 50 per cent. of malt and the rest grain, is what you would say would come into the category of the better-class drinker. The man we are thinking of is the man who gets 5 per cent. of malt and 95 per cent. of grain.

8961. I am putting this case of 40 per cent. of malt, and there you have a whiskey that you could not sell as Scotch whiskey, if your definition were accepted. It would be so difficult to establish a standard that would be fair to both your Highland and your Lowland?—That is so.

8962. (*Dr. G. S. Buchanan.*) If 50 per cent. of malt were the limit, and you had a blend of 40 per cent. of Highland malt, that would be an excellently good whiskey, and a high-priced whiskey in the grain class, would it not?—Yes.

8963. On the other hand, if it was an advantage to the trader that with that 50 per cent. limit he could call it Scotch whiskey merely without declaring the grain, then he would go a little further, and put in a little more malt and bring it up to the Scotch whiskey limit?—Yes.

8964. (*Dr. Horace T. Brown.*) You refer to the high-priced malts which you are using in the Highlands now?—Yes.

8965. This is rather an exceptional year, is it not?—Yes.

8966. There is a greater difference now between the Danubian barleys, of which you speak, and your Scotch and English and Danish barleys than there usually is?—Yes; but still there is always a considerable difference.

8967. You very kindly showed to us when we were there some ethery whiskey, which was of great interest to us?—Yes.

8968. You refer to it in your *précis* as being an example of a whiskey made from an inferior grain?—Yes.

8969. Can you tell us what that grain was—was it Scotch, English or Danish?—It was probably local grain.

8970. It was a high-priced grain?—No, it was local grain; it might have been a high-priced grain, but damaged. I think there are two forms of that ether, one probably produced by some error in fermentation, by using impure yeast and another form I think may arise from the malting floors, but that has not been investigated. At any rate, this year it has been prevalent in the north in whiskey that is made, or probably made, from grain which was damaged.

8971. Which did not germinate properly?—No, which had been germinated before.

8972. Or which did not germinate on the malting floor?—Yes.

8973. There is an inference which you appear to draw in those remarks, that it is not an advantage to use the cheaper Black Sea and Danubian barleys?—Not from our point of view.

8974. But would it not be better to use those rather than such grain as you have been speaking of, because they are sound barleys?—They are perfectly sound, but the labour and the cost of your fuel are the same in both.

8975. The inference from your remarks is that it was a damaged barley which gave rise to the ethery spirit, and, therefore, that the cheaper Danubian barleys may be superior in many respects to the barleys of which you are speaking now?—There is another point about that, that from these light Danubian barleys you would never get the same quality of spirit from our point of view. You do not get the same thickness and body in the whiskey.

8976. At the same time some of your distillers use them, do they not?—Sometimes.

8977. (*Mr. Guillemard.*) In your supplementary *précis* you say that the foreign trade in Scotch whiskey is growing, and that you naturally wish to encourage it?—Yes.

8978. Then in the next paragraph you say that nothing should be exported which cannot legally be sold for home consumption. I do not know whether you were in the room when I was putting questions to Mr. Nicholson, but after what I said then would you explain exactly what you mean by that? What is it that can be exported now which cannot legally be sold for home consumption?—There can be exported a mixture of British and foreign spirit.

8979. You say, "Which cannot be legally sold for home consumption," but it can?—Can it be sold for home consumption?

8980. Yes, perfectly well. That is the point I wanted to put when I was asking questions of Mr. Nicholson. What the regulation says is that these spirits may be blended in bond for export abroad, but may not be blended in bond for home consumption. Outside bond they can be blended, and, having been blended outside bond, they can be sold perfectly legally?—That I did not know.

8981. Your expression "legally sold" does not apply. I did not know whether that was your point?—I could not hear what you were putting to Mr. Nicholson.

8982. In writing your *précis* you were under the impression that the regulations allowed some spirits to be exported to America which could not legally be sold in this country?—Quite so.

8983. I put some questions to Mr. Nicholson this morning to bring out the view that that apparently was the idea of the trade?—Yes, it is so.

8984. It is quite a wrong idea?—Yes, we had some correspondence with Somerset House on the subject.

8985. Not on that subject, I think?—Yes, I think there was some. It was some time ago, when I was Chairman of the Association.

8986. The correspondence that you showed me refers to a different thing?—Yes, this was with the Customs.

8987. This is the point I put to you. Are you not confusing in your mind two things? British and foreign spirits are not allowed to be blended in bond for home consumption, but they are allowed to be blended outside, and they are allowed to be sold?—Yes.

8988. What is exported to America is a blend of foreign and British?—Yes.

8989. You say in your *précis* that such a blend of foreign and British cannot legally be sold in this country, but they can?—That I was not aware of.

8990. Does that affect your position with regard to this matter?—No, because I think that Scotch whiskey should be made in Scotland.

8991. Does it affect your position in wishing the blending of foreign and British spirits to be prohibited?—Certainly.

8992. You still wish it to be prohibited?—Yes.

8993. For what reason?—Because Scotch whiskey should be made in Scotland, and if it is mixed with foreign spirit it is not Scotch whiskey.

8994. We have had this so many times. If foreign spirit is blended with British spirit in bond and exported it must be exported under the description which says it is a mixture?—Yes. I do not think, as a matter of fact, it is done at all, from what I can hear.

8995. What I want to know is what is the damage done to the trade?—If a mixture of British and foreign spirit is exported as Scotch whiskey.

8996. But it cannot be under the regulations?—Then the contention would fail.

8997. What you put forward would fail?—Yes.

8998. (*Chairman.*) If it were sold abroad, and you say something with regard to some correspondence as of Scotch whiskey?—Yes; it would be very damaging to the export trade.

8999. And even in anticipation you want to prevent that?—Certainly.

9000. (*Mr. Guillemard.*) Then I think you wish to say something with regard to some correspondence as to getting a certificate?—Yes. We ask for a certificate to be granted by the officer in charge of the station that the marks on these casks were as stated.

9001. Will you read your letter to the Commissioners of Inland Revenue?—Yes. "Mortlach, Glen

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Livet Distillery, Dufftown, N.B. To the Honourable the Commissioners of Inland Revenue, Somerset House, London. Honourable Sirs,—On exporting spirits we find that some of our customers desire to get the certificate of the Inland Revenue officials of this country as to the correct specification of the goods. We therefore beg to request that when we desire to get such certificate the proper officer on our warehouse be authorised to sign it. We will prepare the specification and the certificate so that the officer will require only to compare and sign it. The specification will include the age, quantity, and strength of the spirits.—We are, honourable Sirs, your faithfully, George Cowie and Son." That was simply marks on the casks. We wished a separate certificate. They go under bond on to the steamer.

9002. Is this for export?—Yes.

9003. The assumption that underlies your request was, was it not, that the Inland Revenue officials would be able to verify that statement and to vouch for it?—To give a certificate that the marks on the casks were correct.

9004. Is it your view that the Inland Revenue could give such a certificate with full knowledge?—Certainly.

9005. (*Dr. G. S. Buchanan.*) What were the marks on the casks?—Supposing it was a cask going to America it would be numbered so-and-so, the consecutive number of the year, say No. 3007 of 1898, or something like that.

9006. Merely as to the date?—Yes, merely as to the date, and the mark on the cask.

9007. Was there any statement as to the whiskey?—No; just the marks on the end of the barrel. Of course, it goes to the Customs under bond, and then it is shipped.

9008. (*Mr. Guillemard.*) I could understand your wanting the certificate, but are you sure that in all cases the Excise have such knowledge of the preparation and the production of each distillation that they could give a reliable certificate of the age, quantity and strength?—Certainly; it is all in their books.

9009. I think there might sometimes be difficulty about that. The Excise have hitherto not given certificates on the understanding that they could not always give them with knowledge. I see you say in your letter: "We will prepare the specification and the certificate so that the officer will require only to compare and sign it"?—Yes.

9010. The reason possibly that the Excise do not give certificates generally is that they know that such a certificate once given would be accepted by everybody as a genuine certificate, and they have serious doubts whether such a certificate would always be a reliable certificate?—Why?

9011. That may be their view?—They have to send a despatch with the package to the Customs at the shipping port. I only asked for a certified copy of this document.

9012. Now, I will ask you a question as to the certificate of age. Are you asking that this should be given as a general rule?—This is from our own distillery warehouse.

9013. We cannot treat you separately. Take a blend?—I would put the minimum—mark the lowest age of the whiskey.

9014. That is getting on to debateable ground. Would everybody accept that as the age?—They have to put on the lowest age of the whiskey supposing it is a blend. Supposing we export a cask of whiskey, and mix two different years together at a distillery warehouse we can only have our own product, the product of that distillery. If we mix two casks together for exportation we have to mark on it the youngest year, and we call it by that year.

9015. But what if you mix five or six?—The mark has got to be the age of the youngest whiskey.

9016. That is the regulation?—Yes.

9017. But what, as a matter of fact, is the age of the blend?—The age is the age on the cask. All we want is the mark on the cask.

9018. If you want the Excise to certify to a particular fact, say, the age of the spirit, or the age of a blend of six different whiskies, how do you get at it?—The average age. Add up the years and divide it by six.

9019. I am not convinced that that is really very reliable. What is the certificate in the case of those five blends? What do you wish the Government Department to vouch for as genuine, so that other people may accept it as genuine? What are you going to put on that blend of five whiskies?—What age would the whiskies be?

9020. Take any age. What system would you have?—The average age. From a distillery warehouse we have to put on the youngest age.

9021. Do you ask that the certificate of age should always be given? A Government Department cannot discriminate?—Then they are under a different rule altogether in this question.

9022. From other distillery warehouses?—Yes. All distillery warehouses are under the same.

9023. Your warehouse is the same as anyone else's?—No, it is a distiller's warehouse, and when we export from a distiller's warehouse we have to put on the cask the youngest age and call it all that age, whereas in a general bond it is a different thing; that is to say, we are kept rather more tightly in hand as distillers.

9024. I know that. I am trying to make my difficulty clear to you. The Commission were trying the other day to find out what could properly be described as the age for a blend, and I do not think we got any satisfactory explanation. I have not got any clear idea of what the age of such a blend is?—I should say two years. Either add up the years and take the average, or call the blend the age of the youngest whiskey you put in.

9025. But still you admit it is a debatable point?—It is, but not on this point.

9026. It depends on all kinds of things?—Not in the case I have put before you now.

9027. Is your grievance that the Excise would not treat the particular sample of a particular lot of spirits sent out from your distillery in a particular way?—The only thing we ask is this: that they should give us a copy of the permit that went with this cask to the Customs at Glasgow, and let it go abroad; that is the whole thing.

9028. You ask that an officer of a Government Department should sign a statement that the particular spirit was a particular age?—The age is on the cask.

9029. But that is a very different thing. The age on the cask is not certified?—We cannot put anything else into that cask except whiskey of that age, and we have to put on the end of that cask before it is sent to the ship the age of the youngest whiskey that is in it. We do not want the age; we want simply to have a copy of that certificate to go along with our documents. That is the whole thing. We do not want any certificate as to age.

9030. (*Dr. G. S. Buchanan.*) Would you mind telling us, apart from the Inland Revenue question that we have been discussing, in the reckoning of age and taking an average age of, say, five whiskies, do you take account of the volume?—You would have to.

9031. You would do so?—Yes; that is where the difficulty comes in.

9032. But if you had different quantities of each of, say, five whiskies, and mixed them all in different volumes, would you, in calculating the average, take account of the different volumes?—Yes.

9033. (*Dr. Horace T. Brown.*) May I suggest to you the proper way? You know the percentages in the composition of your blend?—Yes.

9034. You multiply the percentage of each component by its age in years, and divide the sum by 100, and that will give you the true average age?—Yes.

9035. (*Dr. G. S. Buchanan.*) That is done, is it not?—I believe so, but I am not a blender. All the whiskey that goes out from us has to have the youngest age put on the cask.

9036. (*Mr. J. Y. Buchanan.*) Is your contention, as a distiller, that you are in a special position?—Yes.

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9037. That your whiskey is in a cask which the Excise man knows all about?—Yes.

9038. And you have to put on the cask the age of the youngest whiskey in it?—Yes.

9039. And you wish that to be certified?—Yes.

9040. It has nothing to do with the blends at all?—Yes, it is pure whiskey.

9041. (*Dr. Adeney.*) With regard to this proposition of yours as to the minimum limit of malt in a blend to be called Scotch whiskey, practically is the real difficulty the fact that the Lowland malt is less strongly flavoured than the Highland malt? Is that a practical difficulty in that question? Of course, theoretically we can see that it is?—I think that, value for value, the Highland malts approximate so near to the Lowland malts now in price that there would be no real difficulty. There are only two ways of regulating it, one is by getting a Foods Department to look after these things, who would make a scale from time to time, and the other is for the Excise to do it.

9042. Would you support the suggestion that has been made, that there should be a Reference Board for this?—Certainly, that is wanted badly.

The witness withdrew.

Mr. Thomas Mackenzie, called.

Mr. T. Mackenzie.

9043. (*Mr. Guillemard.*) I believe you are Chairman and Managing Director of the Dailuaine-Talisker Distilleries, Limited?—Yes.

9044. You appear as representing your company, and also representing the North of Scotland Malt Distillers' Association?—Yes.

9045. What distilleries have you under your control?—The Dailuaine-Glenlivet Distillery, the Imperial Glenlivet Distillery, and the Talisker Distillery, Island of Skye, and we had the North of Scotland Distillery at Aberdeen until it was burnt.

9046. Take the Dailuaine-Glenlivet first. What whiskey do you produce there?—Pure malt pot still.

9047. As to the product of your distilleries, what do you do with it as a whole? Whom do you send it to mostly?—We sell to the dealers, and to the blenders at home.

9048. Do you sell most of it to be sold as unblended, or does the bulk of it go for blending?—Chiefly for blending, and also a considerable quantity is used as a self whiskey unblended.

9049. You have no objection in itself to the blending of a pot still and a patent still product?—No.

9050. I think you have definite views as to the description that ought to be affixed to the whiskey according as it is pure malt, or patent, or a blend?—Yes.

9051. How would you define pure malt whiskey?—The pot still as compared to patent still?

9052. Yes. What would be the description you would wish to put on the pure malt when it was sold?—Either patent still Scotch whiskey, or pot still Scotch whiskey, and allow the public to judge for themselves which they consider the best.

9053. That is to say you would have no objection to patent still spirit being sold as patent still Scotch whiskey by itself?—No.

9054. When you got a blend what would your view be as to what the blend ought to be described as?—Blended Scotch whiskey.

9055. Then with regard to the word "Scotch" that runs through all those, would you define that by reference to the materials, or by reference to the country where the manufacture took place?—The country, and the materials to a certain extent. Nothing I think should be described as Scotch whiskey unless it is manufactured from cereals with a proportion of malt for the conversion.

9056. How does Scotch come in there? Must the cereals be grown in Scotland really?—Not necessarily, but the whiskey must be manufactured in Scotland.

9057. The place of manufacture is really what gives the title of Scotch in your view?—Yes.

9058. Then with regard to your blend, what would your view be about the suggestion that has been made to the Commission several times, that it would be possible to make a standard defining the proportions of pot still and patent still that might be allowed?—I think it would be better if there was a minimum of pot still whiskey.

9059. Could you suggest a minimum?—Possibly 25 or 30 per cent.

9060. That represents, I suppose, the minimum proportion that is used now?—About the minimum proportion that is used now; there are exceptions, of course.

9061. If that standard was laid down, or made a legal standard, it would practically be stereotyping, would it not, the proportion which is now being used?—As a minimum.

9062. Do you think that would be an advantageous thing to do to prevent possible changes in manufacture that might come later?—That is very difficult to say. I think as things exist at present it would be an advantage, but one cannot foresee the future.

9063. Would you think it possible that circumstances might change in the future so that it might be rather awkward to tie the standard down as tight as that?—It might possibly be.

9064. But still you are in favour of it at the present time?—Yes.

9065. Then with regard to the ageing of whiskey, are you in favour of the compulsory keeping of whiskey in bond for any period?—Yes, very strongly.

9066. Both pot and patent?—Both pot and patent.

9067. How long would you suggest?—At least two years, and longer if possible.

9068. What would be your reason for that? Would public health enter into it at all?—I think so.

9069. You think it would?—I think that new whiskey must cause drunkenness more quickly.

9070. I will leave that for some medical member of the Commission?—I am not a professional man. I only speak from what I have seen.

9071. Apart from public health, is there any reason you would put forward in favour of the two-year limit?—An older spirit is more palatable, and it must be even to the advantage of the trade to maintain a standard of quality.

9072. If the older spirit is more palatable, as it is, will not the public demand have the same effect as if you laid it down that you must necessarily keep it in bond for a certain time?—I do not think so. In certain quarters, the lower quarters of the large towns, there is no doubt a very large quantity of quite new grain spirit consumed which I do not think can possibly be good for anybody to drink.

9073. That would be prevented?—Yes, that would be prevented if it were two years old.

9074. Then I think you have some views about the reduction of spirits in bond, have you not? It is a small point, but would you like to state your view?—I think it would be to the advantage of the public if distillers and dealers were allowed to reduce the whiskey in bond. The whiskey could be permitted, pot still, patent still, or blended as the case might be, and the permit would thus be a certificate or guarantee to the purchaser that he got what he ordered.

9075. From the same point of view you would like the Excise to issue a certificate of the age and denomination of spirits?—Yes.

9076. At what stage would you like that issued?—For exportation.

9077. But is that only for exportation?—Yes. On the other hand in obtaining goods from bond the permit would be sufficient.

9078. For home consumption?—Yes, if the various qualities are differentiated—if pot still is differentiated from patent still and a blend differentiated.

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9079-80. Do you think that the benefit of a permit of that sort would really get through to the consumer of the spirit? Of course, it might be a great convenience to the trade?—Even to the small trader.

9081. But as to the man who buys over the counter, is it going to do him any good?—That is the great difficulty. But still, the small retailer would then be put in a position to purchase his whiskey from bond, no matter how small the quantity was, so long as it was up to the legal quantity allowed to be cleared from bond.

9082. You are putting a case of an honest retailer who wishes to buy spirit from an honest distiller?—I am putting the case of a retailer who wished to buy spirit from anybody in the trade. His permit would then be a guarantee as to the denomination of the spirit which he was buying.

9083. Do you think the benefit of that would go beyond the small retailer?—I think it would gradually do so. I think the man in the street would come to get it.

9084. That is what puzzles me a little. It seems to me there is a step you have to get over there?—It is possible to do so, and it would be costly, I am afraid; but still, it would be a step in that direction.

9085. (*Dr. Horace T. Brown.*) Although you recommend that not less than 30 per cent. of malted barley should be used in a mash, you do not make a very strong point of that, do you?—I think it would be very much better if a malt were used in the mash sufficient for the conversion of the starch.

9086. You are aware that a much less proportion than 30 per cent. of malt is being used, and has been used, in the past?—I believe that grain whiskey has been made without malt being used at all.

9087. You are speaking now of a new process altogether?—I am referring to the question of sulphuric acid being used in the conversion.

9088. I am ruling that out for the moment. Do you think it is wise to confine the next generation to using 30 per cent. of malt? You know that malts can be made with very different diastatic properties—that the action on the starch of the grain of one malt is different from that of another made in a different way?—Yes.

9089. Do you think we know sufficient about the whole thing at present to stereotype 25 per cent. to 30 per cent., or any percentage of malt?—I stated 25 per cent. to 30 per cent. because I believe the grain distillers of the present day are willing to agree to that.

9090. The grain distillers of Scotland?—Yes.

9091. But is it not a fact that malt is used to some extent in the mash not only to saccharify the starch, but also for the purpose of yeast-production by some distillers who manufacture yeast?—Yes.

9092. That is one of the reasons why a comparatively large proportion of malt is used?—Yes, that is one of the reasons. We never at our own grain distillery at Aberdeen used less than 25 per cent. of malt at any time.

9093. (*Dr. G. S. Buchanan.*) Do you consider that malt in the mash of the grain spirit is very material from the point of view of flavour?—I think it improves the grain whiskey. Grain whiskey made with malt is very much better than grain whiskey where sulphuric acid is used in the conversion.

9094. True. But assuming that 30 per cent. of malt was enough to convert fully, would it make much difference to the flavour if you had over 30 per cent., say, 40 per cent. of malt in the mash. Would it improve the flavour?—It would alter the flavour, but whether it would improve it in a patent still I question very much.

9095. I gather from your *précis* that you consider that patent still whiskies produced in Scotland or England or Ireland are very much akin?—Yes.

9096. You say they are so much so that an Irish grain might be substituted for an English grain, and English and Scotch grains might also be substituted in a similar way without disturbing very much the style of the blend?—Yes.

9097. So long as the ages were suitable, but in no case could a pot still Irish be substituted for a pot still Scotch without completely upsetting the character of the blend?—No, not that I am aware of.

9098. Does that lead you to agree with the suggestion we had from the last witness, for instance, that there should be a definite limit to the amount of malt whiskey allowed in Scotch whiskey? I do not quite gather your position there with regard to the 30 per cent. of malt that you have spoken of?—In a blended Scotch whiskey.

9099. Was that 30 per cent. of malt whiskey in a blended Scotch whiskey?—Yes.

9100. Would you regard the ageing up to a certain extent as a part of the process of the manufacture of a good whiskey?—Yes.

9101. There is one point I want to put to you with regard to the reducing of whiskey in bond. Is the main point of allowing the reduction of whiskey in bond that you suggest that the retailer, the publican for instance, should be able to get the whiskey exactly as he is going to sell it?—Yes.

9102. So that he should not tamper with it, or that he should not alter it in any way?—Yes, that he should have no difficulty, and that he should be in a position to clear his casks from bond, take the whiskey into his retail shop and dispose of it right away.

9103. As it is?—Yes.

9104. With an official description upon it to a certain point?—With a permit.

9105. So far as that can be controlled?—Yes.

9106. Does your Company, the Dailuaine-Talisker Company, sell blends to retailers?—Not to retailers. Our trade is entirely confined to dealers and blenders.

9107. Do you encourage the sale of the self whiskies from your distilleries as well as the sale to blenders?—We do.

9108. You do as a matter of fact sell self whiskies, especially from Talisker, do you not?—And Dailuaine. We sell from all our distilleries.

9109. Can they be had as self whiskies in the London market?—Yes.

9110. (*Dr Adeney.*) I gather from the questions that have been put to you that you see the difficulty of putting a legal minimum to the proportion of malt in a blend?—Yes, there is very great difficulty.

9111. Do you think it would assist at all if the blend came to be more known by the name of the blenders rather than simply to be called Scotch whiskey? I am now thinking of the proprietary blends we see advertised in London?—How do you mean?

9112. What I mean to say is, would it not be a more practical way of protecting good blends, to label them as proprietary blends rather than simply as Scotch whiskey?—It would be a very good thing for those who have now got a very good name before the public, but what about those who have not?

9113. Clearly?—What about the beginner?

9114. They would have to follow in the footsteps of those who had gone before, and if they turned out a good article, with a flavour they could depend upon, they would get upon the market?—You mean to leave the thing as it is?

9115. I mean to leave it to depend upon flavour and describe it by the name of the maker. Then possibly in the export trade there would be a minimum danger of mis-description?—How would you describe a blend?

9116. We have been told there are proprietary blends known by the name of the blender, and these are good blends?—Yes.

9117. I take it if they are good blends they would carry the reputation of Scotch whiskey to America and the Colonies, which they do?—Yes, which they do.

9118. I take it Scotch malt whiskies also may be relied upon as upholding the reputation of Scotch whiskey, but we have been told that there are cheap blends which are a discredit to Scotch whiskey?—Yes.

9119. How would you protect the export trade from those blends?—By the Excise giving a certificate along with it to the exporter.

9120. Would that be a complete protection?—I think it would be accepted by the Colonies and by foreign countries. At the present moment Australia will not accept whiskey under two years old, and the Australian Government are very desirous of ob-

taining some credential that the whiskey that is exported is two years old. All that is required is simply a certificate with the whiskey giving the minimum age, and if it is a blend stating the minimum age.

9121. Would that be a protection as to flavour?—Not as to flavour.

9122. I am afraid not. That is why I threw out the suggestion that it would be possible to label a whiskey by the name of the distillery or of the blender or the firm of blenders, in addition to the word Scotch or Irish, according to the country of origin?—That is done at present.

9123-4. Is not that really a better protection than what you suggest, namely, a minimum proportion of malt in the blends?—Perhaps it is, in a way.

9125. However, would it be possible as a practical matter to conduct all export in bottle?—That all depends on what your export customer demands.

9126. It would depend upon the customers?—Certainly, very much. The Australian markets prefer to receive their whiskey in bulk, and to have the labour of bottling it themselves on the other side.

9127. Does that hold with the American trade too?—Yes, so much so that the Scotch firms have had to open houses in Australia for the purpose of bottling the whiskies there.

9128. Can you give us any experience of the American trade? Is that in a similar state?—Not as far as I know, but to some extent it is, and there is every indication, I should say, of its becoming so. Naturally the American wants to have as much labour done by his own people as possible; and it is the same with the Australian.

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9129. I am trying to see if there is any practical way in which the reputation of Scotch whiskey may be protected?—Yes.

9130. (*Mr. J. Y. Buchanan.*) We have heard about the various methods of protecting, and what occurs to me is this. Might not the buyer be allowed to do a good deal for himself on the old principle of *caveat emptor*? We may make a regulation to make the whiskey a certain age, but let the man buy what he likes best?—Yes.

9131. Do you think that would suit the whiskey trade quite well?—As regards the retailing of whiskey, I think it has not done so so far, I mean to say that in some lower districts of the large towns the customer has to take what he can get.

9131*a*. But he may decline to drink it?

9132. (*Dr. Adeney.*) Practically he is at the mercy of the retailer?—To a great extent, I think so.

9133. (*Dr. G. S. Buchanan.*) His only way is to decline to drink?—He has not done so so far.

9134. (*Mr. Guillemard.*) What would be your view on a point we have had some evidence upon this morning? Would you be in favour of making regulations that the operations that are allowed in bond should be identical whether the spirit is to be exported or whether it is to be drunk in this country?—I think so.

9135. You would?—I think so.

9136. Not only with regard to the mixing of British and foreign spirits, but in all respects?—Yes, in all respects.

9137. For instance, in your own business you have not anything in your mind that you are permitted to do for export that you could not do for home consumption?—No.

The witness withdrew.

(Adjourned to to-morrow, at 12 o'clock.)

SEVENTEENTH DAY,

Tuesday, 19th May, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Colonel GEORGE SMITH GRANT, called.

Col. G. S. Grant.

19 May 1908.

9138. (*Mr. Guillemard.*) I believe you are sole partner of the firm of George and J. G. Smith, of the Glenlivet Distillery, Glenlivet?—That is so.

9139. That is a district that is very closely identified with whiskey, is it not?—Yes.

9140. How long has your firm been in existence there?—Since 1824.

9141. You own a distillery there?—Yes.

9142. When was that started?—1824.

9143. When you first started were your firm the pioneers of distilling in that district?—My grandfather was the first distiller in Glenlivet.

9144. In virtue of that do you make any special claim in connection with the name of Glenlivet? Do you think you have more right to it than other firms?—Yes, we do.

9145. How far would you go in that connection?—We are the only firm entitled to use the word "Glenlivet" without being in conjunction with any other word or any other distillery.

9146. You say "allowed." Do you mean legally allowed?—Yes.

9147. How do you prevent other people using it?—If any other person were to use the word "Glenlivet" without adding the name of the distillery to it he would be proceeded against.

9148. You not only appear on your own behalf, but, I believe, you appear as President of the North of Scotland Malt Distillers' Association?—That is so.

9149. Do you represent the whole of that Association, or only the majority?—The majority, I think.

9150. Could you give us any idea whether the minority is an important minority?—I think so.

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9151. I do not know whether you would like to give the numbers, but do you know what proportion of the firms were included in the majority? Is it a very big one?—I could not give the exact number, but I think there would be a majority.

9152. How many separate distilleries have you in that Association?—Forty-three.

9153. Are they all pot still distilleries?—They are all pure malt pot still distilleries.

9154. You use malt only. With regard to barley, what source do you draw upon for your barley? Do you confine yourselves to Scotland?—In a good season we get our barley from Morayshire, or Banffshire, or Aberdeenshire, but if the season is a backward season and there is a poor harvest we go abroad, say, to Denmark, and get the best barley we can procure. We always buy the best.

9155. Then you do not regard the use of foreign barley as disqualifying the product from being called Scotch whiskey?—I do not.

9156. Could you bring that out a little more? What definition would you give of Scotch whiskey? Could you suggest a definition of Scotch whiskey that would satisfy you?—Our Association has agreed that 50 per cent. of malt whiskey and 50 per cent. of grain or patent still spirit should be called Scotch whiskey.

9157. All grains? What grains do you include among the materials that may be used in the patent still? Would you allow all cereals to be used?—I should think so. I do not know how the patent still whiskey is made in fact.

9158. Then perhaps you would rather confine yourself to giving a definition that would satisfy you for the whiskey you are particularly concerned with; that is to say, the Highland malt whiskey. Could you define that?—Highland malt whiskey is made from the product of malted barley distilled in a pot still in the Highlands.

9159. Then when you come to the sale of your whiskey is it sold mainly for consumption as a self whiskey or for blending?—We sell it all as a self whiskey.

9160. Does it ultimately reach the consumer as a self whiskey, or is it mainly blended?—Partly both.

9161. Do you know which predominates?—No, I do not. It is sold to our agents, Messrs. Andrew Usher and Co., of Edinburgh. They take the greater part of our whiskey.

9162. They would know, of course, but you do not know what happens to it?—I know there is a good deal sold to private firms, and they blend it and send it out themselves.

9163. You have no objection yourself to the blending of your whiskey with the patent still spirit?—Not if the proportion is right.

9164. The proportion you suggest being 50 per cent.?—Yes, that is so.

9165. Why do you ask for 50 per cent.?—If you have too little of the malt whiskey in the blend it would lose the character altogether of Scotch whiskey.

9166. Then with regard to the process, is the process that you are using now for distilling the same as it was when your grandfather originally started the distillery?—Yes, exactly the same.

9167. The still is the same?—Yes, the same shape.

9168. And the materials are the same?—Yes.

9169. Then in every respect it is the same product produced in the same way?—Yes, the very same.

9170. (*Dr. Adeney.*) Do you run your whiskey at the same strength as before?—Yes, about the same strength.

9171. (*Mr. Guillemard.*) I think you have said you have no objection to blending providing that the conditions you suggest are satisfied?—Yes, that is so.

9172. But you wish to bring under the notice of the Commission your views in connection with the tendency to sell an inferior blend?—That is so.

9173. Would you state your views about that?—As I have already said, if you use too little malt in the blend of patent whiskey and malt whiskey, you lose altogether the character and flavours of the malt whiskey. I do not refer to some of the higher proprietary blends, because I think they are very good indeed as a blend.

9174. With regard to the patent still spirit, if sold by itself without any admixture of pot still spirit, would you allow the term "whiskey" to be applied to that?—No.

9175. With regard to the label, how far do you think it would be wise to go? Would you be satisfied if the vessels or casks that contain the spirit, if it were pure malt, were labelled malt whiskey, and if it was patent still spirit only, how would you have it labelled then?—Patent spirit.

9176. And the blend of malt whiskey and patent spirit?—If it contained 50 per cent. of malt, I should call it Scotch whiskey.

9177. And if it did not?—Blended spirit.

9178. Do you think that would be definite enough by itself? Do you think that would inform the public that it had less than 50 per cent. of malt?—The public would know that it had less than 50 per cent. of malt.

9179. You think they would? You think the public would, as a matter of fact, know it when they saw that label on the bottles?—I doubt if they would.

9180. You are doubtful?—Yes, I am doubtful if they would.

9181. That rather brings me to what I wanted to ask. Are you a great believer in the virtue of a label as being generally understood by the public who buy it? Do you think with regard to the labels you have suggested that the public would gradually get to rely on them as indicating certain definite products or not?—They would get by education up to it.

9182. You think they would?—Yes, I think so.

9183. Then the last point I should like to ask you about is this. It has been suggested that all whiskey should be kept in bond for a certain period. Would you be in favour of that?—Yes, I would.

9184. The patent still spirit as well as the pot still?—Yes.

9185. Does your reason rest upon public health at all?—It would in a way to a certain extent.

9186. I will put it in another way. Do you think the public health by itself is sufficient to make such a regulation necessary? We have had very little evidence on this point at present?—When malt whiskey is drunk new, a week old, it is not found to be palatable.

9187. I am thinking of the patent still too?—I have no experience of the patent still.

9188. No, but still you suggest that the patent still spirit should be kept for two years in bond?—Yes. I consider that all whiskey or patent still spirit would mature and mellow and become more palatable by being kept at least two years in bond.

9189. (*Dr. Horace T. Brown.*) You have referred to the fine malt which is used in the Highland malt distilleries, and the occasions when you have had sometimes to go abroad to get good barley for your malt. Is it, or is it not, a fact that the Highland distilleries do in certain cases use the light Danubian barleys very similar to those used by the patent still distilleries?—I could not say what is the practice of other distilleries, but I know we try to get the best barley and the heaviest we can get.

9190. You would not touch those light Danubians?—No, we only have the best.

9191. Then in your definition of Highland malt whiskey would you exclude a pot still heated by steam?—Yes.

9192. Although there are certain Highland distilleries using such stills?—I do not know about that, but I would exclude them all. The still should be heated by fire.

9193. This information has been given me that such stills are used in the Highlands?—Yes; I do not doubt it.

9194. You include the Orkneys in the Highlands, I suppose?—Yes.

9195. You think that the distinctive character of Scotch whiskey can only be produced in such stills as that?—I think so.

9196. Would you go so far as to say that whiskey of the Highland type could ever be produced by any other form of distillation than that now in use?—It has not been done yet, I think.

9197. No, but if such a definition as this came in it would prevent any experiments being made in that direction. Do you think it desirable to handicap the distillers to that extent?—I do not know.

9198. You would like to see the old-fashioned form stereotyped?—I do not think they can improve on the old-fashioned form.

9199. We never know what improvements can be made in any manufacture?—No, we do not.

9200. What is the minimum age at which you consider your whiskey fit to be consumed as a self whiskey?—I should say about eight years, and going on to twelve.

9201. But I suppose a great deal of it is consumed under that age, especially by the blenders?—Yes, but it is all pretty old that goes into the blends. It is about the age I have mentioned.

9202. Then you said that you do not know that the patent still spirit has been sold by itself as Scotch whiskey?—I do not know.

9203. We have had it in evidence from several witnesses that this patent still spirit has been sold as whiskey for the last forty years or more?—I understand so, but I have no personal knowledge of it.

9204. I rather gathered from your remarks that you are of opinion that the cheaper rate at which patent still spirit is made has been the chief determining cause in bringing it into use?—Yes—one of the causes.

9205. You do not consider it the sole cause?—No, I do not altogether.

9206. You consider that whiskey may be sometimes improved by blending?—Yes, a certain proportion to suit different tastes.

9207. You have also said that your Association considers that at least 50 per cent. of malt whiskey ought to be in every blend in order to entitle it to the name of Scotch whiskey?—That is so.

9208. Did you hear a question which I put to Dr. Cowie on this point?—I am afraid I do not recall it.

9209. I should like to ask your opinion on this one point. Supposing you had a blend of 50 per cent. of Lowland malt, costing 2s. 6d. a gallon, would you put that on the same footing as a blend containing 50 per cent. of fine Highland malt costing 5s., or even more?—I do not think it would be such a good whiskey.

9210. They would both be Scotch whiskey?—Yes.

9211. They would both be entitled to the term "Scotch whiskey"?—Yes.

9212. Then supposing you used a less proportion, say, 40 per cent. of Highland malt, and 60 per cent. of an old grain spirit, that would not come under your definition of "Scotch whiskey"?—It would not.

9213. But might it not be a better whiskey than, we will say, a blend made with 50 per cent. of a cheap Lowland malt and 50 per cent. of new patent still spirit?—I would not like to say. I have very little experience in blending—in fact, none at all.

9214. Probably the superior article would be handicapped by not being allowed to be sold as "Scotch whiskey," whereas the inferior article could be?—I see what you mean.

9215. I put forward that as one of the difficulties in establishing a minimum standard of any kind?—Quite so.

9216. (*Dr. G. S. Buchanan.*) What you advocate, I understand, is a broad classification. First of all malt whiskey, then Scotch whiskey containing at least 50 per cent. of a malt whiskey and no more than 50 per cent. of Scotch grain whiskey, and then blended grain whiskey, or whatever it may be called?—Yes, that is so.

9217. Do you put those forward mainly as broad classifications with the idea that in each class there may be differences of quality; there may be an excellent and an inferior malt whiskey, and an excellent grain whiskey and an inferior grain whiskey?—Yes, that is so.

9218. It is merely a general means of affording the public some sort of intimation of what they are being supplied with?—Yes, that is so.

9219. It is not by any means perfect, but you think it is better than nothing from the point of view of the public to give them an opportunity of choosing?—Yes, I think so.

9220. A classification of that sort is already being adopted by places like the Civil Service Stores in their catalogue?—I am not aware of that.

9221. I gather that a beginning is being made since these inquiries have taken place. I have had one or two catalogues of wine merchants sent me which show a distinction between malt whiskey and blended whiskey, with ranges of quality and price in each?—Yes.

9222. When you told us about your distillery being the first in Glenlivet, you wished to make an exception with regard to the illicit trade, did you not? There was plenty of smuggled whiskey in those days?—Yes, but they were not called distilleries. Perhaps I should have said ours was the first licensed distillery.

9223. Your Association, which comprises 43 separate distilleries, includes, of course, some distilleries which were put up fifteen or twenty years ago, or at the time of the whiskey boom, whenever that was?—Yes.

9224. And would have been put up, or very largely controlled by, blenders, would they not?—Yes, that is so.

9225. Their output would entirely go to blenders in some cases?—Yes.

9226. Were distilleries of that class those which constituted the minority that you were telling us of in the voting with regard to this definition of yours?—I think so.

9227. As to the use of local barley, have you had years in which nothing but local barley was used at your distillery?—Yes.

9228. Many years?—Yes, a good few years. It is the exception to use foreign barley.

9229. It is an exceptional year when you use foreign barley?—Yes, like last year.

9230. You would rather go back to the local barley when it is suitable?—Yes, we prefer the local barley. For one thing it is generally cheaper.

9231. You told us that the tendency in blending has been to use more and more of the cheaper article, the patent still whiskey, and less and less of malt whiskey?—That is so.

9232. And without indicating to the public that it is patent still whiskey, or a blend of malt and patent still whiskey?—That is so.

9233. As to the definition of malt whiskey you would limit it, I understand, to the particular form of distillation that is in practice now?—Yes.

9234. But you do not mean that the definition would necessarily last for all time. Any machinery which was put up to establish official definitions, if such a thing were decided on, would surely have to be adaptable and capable of modification when new conditions arise?—That is so.

9235. That would be common sense, would it not?—Oh yes, I think so.

9236. Your whiskey and some other Highland malt whiskies which one could name at once would be classed as constituting by itself one of the best kinds of whiskies that could be obtained anywhere, would it not? I put it generally like that?—Yes.

9237. And many people, at any rate, if they were given the chance of trying it, would not consider it improved by the addition of any other whiskey or grain spirit?—No, I do not think so.

9238. It will stand considerable dilution with water, and yet give you a satisfactory beverage?—Yes, that is so.

9239. And from that point of view it is economical?—Yes, that is so.

9240. The blending business has had a distinct trade advantage from the point of view of Highland whiskey, it has popularised it, but it has tended, I suppose, to put the self whiskies rather in the background, has it not?—Yes, it has.

9241. It is more easy for the public to obtain your eight to ten years old in a blend with a considerable amount of grain than to obtain it by itself?—I think there would be no difficulty in obtaining our whiskey eight years old, or older, from our agents in Edinburgh—pure; direct from the agents.

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9242. If people know what it is and how to get it?—Yes.

9243. Could you say quite roughly what sort of price would be paid per gallon for a self whiskey of your class about eight years old by the public? A rough range is all I want?—Perhaps about 24s. a gallon.

9244. And they would pay very much the same range of price for a whiskey containing, say, 50 per cent. of your whiskey, and the rest matured grain spirit?—I do not know. I have never sold any blended whiskey.

9245. At your distillery you keep the foreshotts and feints separate, do you not?—Yes.

9246. They both go back to the spirit still?—Yes.

9247. But they are collected separately?—Yes.

9248. At the beginning of the season when you are starting in the spirit still you always have a proportion of foreshotts and feints from the previous season to begin with?—Yes, that is so.

9249. I ask you that because we had an account from Dr. Schidrowitz of some experiments in distillation in which he gave the analyses of whiskey obtained by distillation of low wines by themselves in a spirit still without the addition of foreshotts or feints from a previous distillation. When I had an opportunity of seeing some distilleries in the Highlands I asked at almost each distillery whether they had any experience of producing whiskey in that way, and the result in all cases was negative. I do not know if that is your experience?—That is my experience.

9250. I was told that in starting a new still when you have no foreshotts and feints available it was necessary for some time to distill so as to get foreshotts and feints, and no whiskey at all, so as to provide the necessary foreshotts and feints?—I have no experience of that.

9251. One more question as to the value to the consumer of knowing the amount of malt in a blend. Supposing you had a blend containing 60 per cent. of Highland malt and 40 per cent. of grain, and another blend containing 20 per cent. of Highland malt and 80 per cent. of grain, the same malt and the same grain, you would consider the first the superior article, would you not?—Yes.

9252. Would you have any different opinion if the 40 per cent. of grain in the first case was made in London and the 80 per cent. of grain in the second case was made in Scotland?—I do not quite follow.

9253. In the one case you had your 60 per cent. of Highland malt and your 40 per cent. of grain spirit made in London. In the other case you had 20 per cent. of Highland malt and 80 per cent. of grain which has been made in Scotland. Which is the better whiskey?—The one with the most malt, I should think.

9254. (*Dr. Adeney.*) I gather from you that you consider the characteristic property of whiskey is the flavour?—I do.

9255. And flavour distinguishes the Scotch whiskey from the Irish whiskey?—Yes.

9256. They are two distinctive things, are they not?—Distinct flavours.

9257. And that is the chief thing about these whiskies—the flavour?—Yes.

9258. That is the desirable thing to be obtained by the distiller?—Yes.

9259. That flavour depends upon certain fundamental things, does it not—the water that you use, the materials that you use, and the care in the conduct of the various processes of production in the distillery?—Yes, that is so.

9260. Is not the after process of distillation of secondary importance? What I mean to say is, you have the flavour from your materials, and the water, and the care in details?—Yes.

9261. If you can get that flavour by any process of distillation would not such a distiller be entitled to say that is Scotch whiskey if he obtained the Scotch flavour? I am trying to see whether you would not advocate a definition of whiskey from the materials used—a broad definition of whiskey?—I do not think he could make it the same unless he had the same materials, such as the water and the peats.

9262. Those are the fundamental things, as I understand from you?—Yes.

9263. So that whatever improvements he could reasonably look forward to would be improvements in the process of distillation, would they not? It is not impossible to look forward to an improvement in the pot still process, for instance, and still retain the flavour?—I think it would be difficult to improve the flavour of the malt whiskey.

9264. I am now taking the flavour of malt whiskey as the greatest good which you can get from your materials?—That is right.

9265. But if you could get that excellent flavour by an improved process of distilling, you would not object to the name "Scotch whiskey" being applied to the product, would you?—You want as well as the flavour the aroma and body as well.

9266. But if you had got all those?—Then I would not. There is nothing more to be had.

9267. We are on safe ground if we regard whiskey as a product of certain materials?—Yes, quite.

9268. But I am not quite so sure that we are on similarly safe ground if we extend the definition to include the utensils used, but I gather from you that I am right in thinking that the materials and water and care in the conduct of the processes are fundamental considerations in the question?—Yes, and the altitude has something to do with the manufacture of whiskey.

9269. Do I take it from you that you are still of opinion that heating by direct fire is also a fundamental consideration?—I do think so.

9270. You hold that opinion with the Irish pot still distillers and Dr. Cowie?—I hold the opinion that the pot still should be heated by fire.

9271. A great deal has been said upon the question of a minimum limit of malt in a blend so that the mixture should be called Scotch whiskey, but I am not quite clear as to what is really in the mind of your Association when they put that limit forward. What is their idea in doing that? Is it to insure quality and insure flavour?—Partly that, and partly not to lose the character of the Scotch whiskey in the blend.

9272. But would that proportion result in protecting the character of your flavours and quality of Scotch whiskey?—It does to a certain extent.

9273. What makes me ask you is this. This has been put to me by a former witness, Mr. Greig, as an example of the difficulty there would be in attempting to guarantee the quality of a blend by putting a legal minimum limit to the proportion of malt. He says: "For example, a blend of 50 per cent. of grain whiskey and 50 per cent. of a cheap plain malt which costs on an average 2s. per proof gallon new, would meet the standard." Do you follow that?—Yes.

9274. "While a blend of 55 per cent. of grain whiskey and 45 per cent. of Glenlivet or Islay whiskey, which costs 3s. or 3s. 6d. per proof gallon new, could not be sold as Scotch whiskey." Do you see the difficulty?—Yes.

9275. There can be no question, I take it, as to the quality—that the latter blend would be of superior quality to the former?—Yes, I see that. I do not think that the blender would be apt to use much of the Lowland malt whiskey.

9276. But do not you complain yourself that there are blends of bad quality being sold?—Yes, I think so.

9277. Are those blends of bad quality simply bad in quality because they contain a large quantity of grain spirit?—That is it.

9278. Did you wish the Commission to understand that the malt is always good that is used in these blends of poor quality?—All malts are not the same. There are good and better malts.

9279. So that Mr. Greig is right in this suggestion that I have just read out to you?—Yes, perhaps so.

9280. That you could get a whiskey containing cheap plain malt, and you would not regard that as a blend of good quality?—No, not as good.

9281. There is that difficulty. Do you think you would have better protection in the trade if the whiskey was sold under the name of the distillery or the name of the blender? Would that be a better

protection, do you think?—It is very difficult to say. I do not think I can give an opinion upon that.

9282. Do you think there would be any possibility of labelling these blends and calling them blends of malt and grain if they contained 50 per cent. of malt or a blend of grain and malt if they contained less than 50 per cent. of malt? Would that be a practical means of distinguishing?—I think so. I think that could be done.

9283. Some of the blenders who have given evidence before us have objected to their high quality blends being called blends. They claim they should be called Scotch whiskey. Do you think yourself they would be prejudiced by their blends being called Scotch blended whiskey and not simply Scotch whiskey?—I do not think so.

9284. I should like to ask you with regard to the pot still process. Do you regard the ageing of the whiskey as a part of the process?—Yes.

9285. You regard that as an essential part of the process?—The quality of the whiskey is helped by ageing.

9286. I know there is no accurate information on the subject, but what is your idea of the changes that go on in new whiskey during the process of ageing? Have you formed any opinion yourself?—It becomes more palatable.

9287. What is that due to? Is that from the disappearance of unpleasantly tasting constituents?—From some of the bye-products, I should think.

9288. Do you think there is anything in the suggestion that new products are formed?—I do not think so. The unpleasant products may be changed by ageing.

9289. So that the ageing is simply a process to get rid of bye-products having an unpleasant taste or which interfere with the good flavour of the matured whiskey?—I think so. It gets more mellow by age and more palatable.

9290. Have you had any instances yourself of the blends of poor quality you refer to? Have you tasted those yourself?—No, I cannot say I have. I have drunk blended whiskey.

9291. I gather from a former answer of yours that you regard the poor quality as entirely due to an addition of too large a quantity of grain spirit and not necessarily from the use of an injurious malt spirit?—That is so.

9292. (*Dr. Bradford.*) Your whiskey is entirely a Highland malt whiskey?—Yes, that is so.

9293. I gather from you that it is sold partly as a self whiskey and partly blended?—Yes.

9294. When it is sold as a self whiskey what is the name applied to it?—"Smith's Glenlivet."

9295. Can you tell us what it is called when it is blended?—Blended Glenlivet.

9296. It has distinctly another name?—It is not "Glenlivet" then.

9297. I want to get out whether when it is sold as Glenlivet whiskey it has a different name to what it has when it is sold as a self whiskey?—Our agent sells it as a blended whiskey.

9298. But is it not by a different name? It is no longer called Smith's Glenlivet, is it?—Not the blend.

9299. (*Dr. G. S. Buchanan.*) It is called "Old Vatted Glenlivet" is it not?—Yes, that is what it is called when it is blended.

(*Chairman.*) The Commissioners are much obliged to you for the evidence you have given.

The witness withdrew.

Mr. Henry S. Keith, called.

Mr. H. S. Keith.

9300. (*Chairman.*) You have been the Provost of Hamilton?—Yes.

9301. You are at present a Councillor of that Borough and Honorary Sheriff's Substitute of the County of Lanark?—Yes.

9302. Do you also carry on the business of a wine merchant?—I do.

9303. I believe you have been familiar with the wine and whiskey trade for 37 years?—I have.

9304. And you have been during that period in the firm of James Keith, now a limited company?—I have.

9305. That firm was founded in the year 1849?—That is so.

9306. Are you now the Managing Director of the Limited Company?—I am.

9307. Does that Limited Company carry on a wine and whiskey business which is also associated with groceries?—Yes.

9308. That, I believe, is constantly the case in Scotland?—Yes, it is a very old custom in Scotland.

9309. I want some information from you, but first of all let me lay the foundation for it. I believe for many years you have made a study of the Licensing Acts, the old as well as the recent ones, and the history of the liquor trade generally?—I have taken great interest in those questions.

9310. That has been almost scholastic, but in addition to that you have a personal knowledge of the whiskey trade as now carried on, and as to how far it has followed public taste?—I have intimate knowledge of that.

9311. Beginning with our familiar question of what is whiskey, I believe your view is that we ought to discover and define what is the meaning of the word "whiskey"?—That is so—what is its derivation?

9312. What do you say is the root of the word "whiskey"?—It is the Gaelic "uisque beatha," which is the Gaelic translation for the old Scotch name of whiskey—aqua vitæ.

9313. The old Scotch name was aqua vitæ?—Yes.

9314. And on that was founded the Gaelic root of the word "whiskey"?—Yes. Then it came back to us corrupted into "whiskey."

9315. Do not some people trace the word "whiskey" to an Irish root?—Yes. They call it "usquebaugh" in Ireland, but in Scotland it is "uisque beatha." In Irish it is practically the same.

9316. It runs up more in sound to the word "whiskey" than your Scotch word?—Yes.

9317. (*Dr. Adeney.*) We admit "uisque beatha" in Ireland?—Yes, but they call it "usquebaugh" in Ireland.

9318. I do not know that a Celtic speaker does, but that is the popular idea?—Yes. "Usquebaugh" appears for the first time in English legislation in 1736.

9319. (*Chairman.*) You say a corruption of these words is found in the English Act which imposed high licence duty in 1736?—Yes.

9320. Was the word "usquebaugh" used there?—Yes.

9321. I believe the poet we have had the pleasure of hearing quoted used similar terms?—Yes, he called it "usquebæ."

9322. During the eighteenth century your view is that the word was in a transition state?—That is so.

9323. And it is doubtful whether the word "whiskey" was in common use until the latter portion of that century?—That is so.

9324. We have its use by Burns in those words which have been placed before us, where he uses "usquebæ" and "whiskey" and "aqua vitæ"?—In one poem alone he uses the three terms.

9325. How long did the term "aqua vitæ" go on in use in the trade?—We ourselves used it when I went into the trade. We always entered our orders for whiskey as orders for "Aqua." My father never used anything else but the word "Aqua" in entering orders.

9326. At the same time, was the word "whiskey" used as being synonymous with aqua?—It was by the

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public, but the word "spirits" was just as often used as either "aqua" or "whiskey." "Whiskey" has come more into use in the last 25 years as a word in the trade.

9327. And this term "Aqua vitæ" was used in statutes during the whole of the eighteenth century?—It was.

9328. In determining what is whiskey you get some information if you discover what aqua vitæ was composed of?—Yes—what was aqua vitæ.

9329. You have prepared an appendix (*see Appendix H*), but I want to have it in your evidence orally. In 1579 was the making of aqua vitæ prohibited for nine months, but lords, barons and such like were allowed to distil their own "malt and stuff" within their own houses?—That is so.

9330. The use there was pointing to the word "malt"?—Yes—and "stuff." Those words were used in conjunction.

9331. How do you translate that?—Malt and other substances—not necessarily malt alone that they were using, but malt and stuff—something else other than malt or along with malt.

9332. There is a term we shall find constantly used, and that is the term "beer." It came in after barley. There were the terms barley, beer and big. What was "beer and big"?—Beer and big means the same, I believe, but beer was a species of barley, or a different form of barley. Evidently the form in which the cereal first appeared before it was improved. I think barley is an improved form of beer got at by cultivation, although the statutes seem to treat them as two separate things on various occasions.

9333. Have you not some authority for saying that beer and barley are distinguished as two distinct cereals?—Yes.

9334. What cereal do you think beer was?—All I say is the legislature distinguish them as two distinct cereals, and did not treat them as the same cereals.

9335. The first excise that you speak of is that which was laid on in the year 1644?—That is so.

9336. And the materials from which this, which was then called "aqua vitæ," could be made were not specified?—They were not specified.

9337. Now come to the next Act. In 1655 the excise for all aqua vitæ or strong waters made or distilled within Scotland, whether of foreign or domestic spirits or materials, was fixed at 2d. per English gallon?—That is so.

9338. Then there is no mention there of the choice of materials?—There is no mention of the choice of materials.

9339. Then, again, soon after the Restoration there was another statute in 1661, and there, again, the materials were left open?—That is so.

9340. But a differential rate was fixed in favour of malt?—That was so.

9341. And that so continued till 1695?—Yes.

9342. In 1700 authority was granted for distilling in Glasgow from malt, sugar and other liquors. How do you read that?—The spirit was distilled from malt, sugar and other raw wines in the wash and other materials, that is to say, it was obvious that malt alone was not the substance from which the spirit was derived, but other materials or other liquors, cider and perry for instance, is given by the legislature at various times as a source from which spirits can be extracted.

9343. There is another statute that I want to mention in 1695, when we are coming to the time of William III.'s standing army. You say in your Appendix: "The estates of Parliament for maintenance of a standing army and defence of the coast granted an additional fund to the supplies, over and above existing excises of two pennies (Scots) upon the pint of ale and beer brewed for sale and sold, as also two shillings (Scots) upon each pint of aqua vitæ and strong waters brewed or made of malt to be vended or sold within the Kingdom, and likewise an additional excise of two shillings (Scots) upon each pint of aqua vitæ and strong waters brewed not made of malt, excepting what is made of wine." Taking the currency of that period, two shillings a pint was a very high duty indeed?—That is two shillings Scots, which is really the value of 2d. sterling money.

9344. That is a Scotch statute?—Yes. Scotch currency was really value for one-twelfth of sterling.

9345. Then that statute repealed the excise on malt and granted in lieu of it three shillings (Scots) more upon "ilk pint of aqua vitæ, or strong waters not made of malt, brewed and sold within the Kingdom, and six shillings upon ilk pint of aqua vitæ, brandy or some strong waters imported"?—Yes, my lord. The point there is that aqua vitæ evidently was made not merely from malt but from other materials than malt, and that a differential duty was charged upon that aqua vitæ not made from malt.

9346. It was a preference in favour of malt?—Yes.

9347. (*Dr. Horace T. Brown.*) That was before there was any malt duty imposed?—There was a small duty in Scotland for some time, but it was repealed in 1695.

9348. But at the time there was this differential duty, and there was no malt duty?—You will find in 1661 that there was a malt duty of two merks (Scots)—a merk being 13s. 4d. Scots, or 1s. 1⅓d. English.

9349. (*Chairman.*) That continued until 1695?—Yes.

9350. And then it was repealed?—Yes.

9351. This excise was in place of the Malt Tax?—Yes.

9352. Do you know how this duty was collected?—It was collected from the distillers or brewers.

9353. Was not the aqua vitæ tax to be collected from the retailer?—I do not think in this case it would be. I think the foreign tax upon spirits was collected from the vendors, but I think in this case it was collected from the distillers.

9354. You say in your *précis* it used to be collected from the retailers. Then in 1700 did the Scotch Parliament grant authority for a manufactory in Glasgow for sugar and the distilling of brandy and strong waters from malt, sugar and all the other liquors except wines?—Yes, my lord.

9355. Then there was a preamble: "That these were as good as could be imported from France, and profitable, 'both for the consumpt of malt, which is a native product, and for convenience within the country and for foreign trade'"?—Yes, my lord.

9356. Then it recites that the manufacture of sugar to which the statute also applied and distilling of strong waters deserved encouragement?—Yes, my lord.

9357. Then there is a statute that we may mention now, although it is a little out of order of date. In 1736, 9 George II. there is a statute which says: "Nothing in this Act contained shall extend to charge with any of the duties directed to be paid . . . any spirits made or distilled from malt and retained and consumed within that part of Great Britain called Scotland which spirits are commonly called or known by the name of aqua vitæ"?—Yes, my lord.

9358. That was repeated in 1751?—It was repeated in 1751. My point there is that taking these two statutes alone it might be argued that aqua vitæ was made from malt, but when you come to 1793 when the English excise duty, or rather the English licence duty was charged on the Scotch retailer for the first time the Act narrates that spirits evidently were made and distilled from malt, corn, grain, barley, beer and big. The reason why I give the 1736 and the 1751 Act is in order to distinguish between them and the 1793 Act.

9359. The 1793 Act is the 33 of George III.: "Whereas it is expedient to repeal the duties on coals, culm or cinders brought coastwise into Scotland and to substitute other duties in lieu thereof." Then Section 2 says: "From and after the 10th October, 1793, every person who shall retail any spirits made or distilled from malt, corn, grain, barley, beer, big, or other British materials, and which spirits are commonly called and known by the name of aqua vitæ in that part of Great Britain called Scotland, shall take out an Excise Licence." I gather from your evidence you have no doubt that statute must have referred to what we now call whiskey?—Yes, undoubtedly.

9360. There it is spoken of as being made from malt, corn, grain, barley, beer, big, or other things?—Yes.

9361. Then in the same statute there is a duty: "All and every person in that part of Great Britain called Scotland 'who shall sell . . . any spirits made or distilled from malt, corn, grain, barley, beer, big, or other British materials, commonly called and known by the name of aqua vitæ, unmixed or mixed with themselves or any other ingredients in any less quantity than half a gallon, shall be deemed and taken to be a retailer.'" I gather from you you do not know of any other spirit that was called aqua vitæ except our present whiskey?—I do not think there was in Scotland any other spirit at that time.

9362. (*Dr. Adeney.*) Was brandy never referred to as aqua vitæ?—At the beginning brandy was aqua vitæ when introduced into this country. Then we used the term aqua vitæ as applied to the spirit made from malt, which was originally assumed to be a brandy.

9363. (*Chairman.*) I want to refer to the statute of 1784 which speaks of the duties on "low wines and spirits." They were discontinued and a duty placed instead upon every gallon of fermented wash or wort. The provision ran, "Brewed or made for extracting spirits for home consumption from any malt, corn, grain, or tilts or any mixture with the same." What is the meaning of the word "tilts"?—Tilts, or the bottom of the vats, I believe it is—the residue.

9364. (*Dr. Horace T. Brown.*) Was that what was known as the Wash Act in 1784?—I think so. It was immediately after it that the duty was put on the capacity of the still. It did not evidently last long.

9365. It only ran, I think, for two years?—Yes.

9366. That is the Wash Act?—Yes.

9367. (*Chairman.*) You say in your *précis* "After the union"—was that the Irish union or the Scotch union?—The Scotch union in 1707.

9368. "In several Acts aqua vitæ made from malt in Scotland is referred to and excluded from duties payable in England." Then you come to the Act of 1793, and you set that out. Then there is a differential duty in favour of British materials, enumerating various kinds. You say, "Barley, malt, and beer malt were differently treated in 1803, the operation of malting the two varieties being allowed only when completely separate and apart and under a different roof"?—That is so.

9369. That was in 1803?—Yes.

9370. As early as 1806 do you find a trace of evidence that the Highland distillers were using both malted and unmalted corn and grain and oats?—Yes, my lord.

9371. I believe the manufacture of that product was authorised by Statute of 1806?—That is so.

9372. Does that refer to the Highlands or to the Lowlands?—The Highlands were differently treated, and that Act dealt with the Highlands only. The section of the Act referred to dealt with the Highlands only.

9373. You gather from this, according to your view, that the expert advisers of the Crown who produced these statutes were dealing with materials which were known as being used in the manufacture of the product?—Undoubtedly.

9374. You say they would not have inserted this in these statutes unless corn, grain, as well as malt, was being used in the manufacture?—As a custom of the trade.

9375. Again in 1823 you find Scotch as well as Irish spirits spoken of in the Parliamentary statutes as "distilled from wort or wash brewed or made from malt or from corn or grain malted or unmalted"?—Yes, that is the phraseology of the Act itself.

9376. The Act of 1823?—Yes.

9377. (*Dr. Horace T. Brown.*) Did that apply to the Highlands also? Was that universal?—Yes, because the statutes ceased to differentiate after 1816 between Scotland Highland and Scotland Lowland and between Scotland and Ireland.

9378. (*Chairman.*) They referred to Scotch and Irish whiskey too? That is the 1823 Statute?—Yes, my lord.

9379. So it must have been general?—Yes.

9380. All this is very interesting information that you have collected, and it seems to produce this result, that aqua vitæ, or usquebaugh, was not the exclusive product of malted grain. That is the point you are making?—Unquestionably.

9381. And was not so down to the commencement of our present licensing system?—I put 1828 as the beginning of our present licensing system.

9382. Now we come to a period I will not touch upon in any detail, and that is the period of the corn laws. Then there was considerable protection sought up to the year 1845 or 1846 for the protection of our native agricultural produce?—Yes, my lord.

9383. Getting away from the statutes for a moment, in the earlier times (I will take the end of the eighteenth century and the commencement of the nineteenth) where were the Highland whiskies made?—From 1784 to 1816 there was a peculiar provision which excluded the Highland whiskies made in small stills from the Lowlands or from England. The statute dealing with that is the 25 George III., cap. 22.

9384. That brings you up to the year 1785?—Yes, that is the beginning of it. Section 10 reads thus: "No spirits, the produce of such licensed stills, shall be allowed to pass, either with or without a permit, into the southern parts of the Kingdom, either by land . . . or by water carriage . . . and all spirits distilled to the west and north of (a prescribed line) that shall be found passing to or in other parts of the Kingdom, either with or without a permit, shall be liable to seizure."

9385. What is the substance to be used as a product?—The produce of such licensed stills. That is the small still which was specially licensed under a smaller duty than the stills in other parts of the Kingdom, but the produce of those stills must be consumed within the parish or within the district in which the whiskey is made.

9386. What name did they call it? It says "the produce." It does not say aqua vitæ?—No, it is called spirits at this stage. The statutes commenced to speak of "spirits."

9387. At that time they remained small stills in different houses?—Yes.

9388. Would it be likely that they would obtain malt, or would it be grain unmalted?—The statute prescribed that it was for the purpose of encouraging local agriculture, and the presumption is that it would be barley, bere or bigg, or oats.

9389. It might not be malted?—Yes, both malted and unmalted.

9390. In the small stills?—Yes, but malt would be most largely used, I think.

9391. You say in your *précis* "It would be historically inaccurate to say that the Highland small still whiskey was what was known as aqua vitæ, usquebæ, or whiskey." That "or whiskey" is your own assertion. You have not yet any record of the word "whiskey"?—No, the word "whiskey" never appears in the statute as a word down to 1823.

9392. In 1823 we obtain it?—I do not think it appears in the statutes at all. I have not gone further than 1823 or 1824, but it never appears in the statutes under the word "whiskey."

9393. I was under the impression it did, but we will see when we come to it. During the period we have been speaking of what do you say was the product of the Lowland distilleries? Was that from grain as well as from malt?—Undoubtedly.

9394. How do you know that, or why do you say that?—Because the Legislature had to pass an Act charging unmalted grain with the same duty as malted grain for the purpose of protecting the Revenue, and continually afterwards the distiller is called upon to give the quantity of the malt as well as the quantity of the unmalted grain that he uses in his mash—for Revenue purposes.

9395. The consumer could not obtain the Highland whiskey? He was drinking Lowland whiskey?—He must drink the Lowland whiskey because the Highland whiskey was proscribed.

9396. (*Dr. Horace T. Brown.*) While the Lowland whiskey could gain access to the Highlands. That was their point of contention?—That was their point of contention.

9397. (*Chairman.*) Having dealt with this interesting matter of the statutes, I am now going to use

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your information by asking you, with your knowledge of what you have told us, what, in your opinion, is the proper definition of whiskey as it existed in what I call the pre-Islington days, before the struggle arose?—I say that one must have an accurate knowledge of what whiskey was composed of then in order to arrive at an accurate knowledge of what ought to be regarded as whiskey now. If it can be shown conclusively that whiskey was not the product of malt exclusively then it would be absurd to introduce a new ideal as to what whiskey should be. Whiskey surely is a substance of historical character, and what whiskey was, or what aqua vitæ was, should determine largely what is whiskey now.

9398. That is your view?—Yes, my lord.

9399. Up to this period, as we know now, in 1831 we get rid of all questions of manufacture of patent still and pot still, and it is really a question of material?—There was no question then of the different stills.

9400. There were the small stills and large stills?—Yes, and unquestionably different qualities obtained, not marked differences of manufacture.

9401. Although there was no question of two differently named stills, the patent still and the pot still, there were improvements made from time to time in the old form of still?—I think so. I think, if one might be permitted to infer, that the real statutory origin of the improved still is to be found in the Act of 1816, which provides for methods of manufacture, and makes it evidently much more difficult for the manufacturer to go on with his business. It deals with what is to be done with feints.

9402. (*Mr. Guillemard.*) Do you refer to the Act of 1816?—Yes. I deal with it at the end of my Appendix, where I say: "This Act, Section 26, also provides for methods of manufacture." I think if Section 26 of the Act of 1816 were referred to, I assume, and I think it is a fair assumption on my part, that there we have the root of the introduction of improved methods. It is the Act of 56 George III.

9403. (*Chairman.*) Just to go back for a moment to a more remote period. Is there not some trace in the year 1599 of a new form of kiln that was invented?—Yes, it was invented by one Eustatius Roghe.

9404. He was granted a monopoly by Act of Parliament for a new form of kiln which was spoken of as "a new form of kiln never used nor practised within this realm in time byegone, whereby not only great quantity of fuel may be spared, but also that the malt shall retain no taste of the materials wherewith it shall happen to be dried." Would that be with reference to malting?—That was with reference to drying the malt.

9405. It is interesting to see that there was an advance being made and encouragement being given for the advance in production?—That is so.

9406. Coming now to modern times, at present the produce of all distilleries, or nearly all distilleries, is sold to the trade with the name of the distillery?—That is so, my lord.

9407. And practically does any question arise in that sale between the patent still production or the pot still production?—No question arises in the mind of the buyer. He knows what he is buying.

9408. He would take Glenlivet or Cambus, or whatever it is, and he knows what he is buying?—He knows what he is buying.

9409. That is the wholesale trade?—Yes.

9410. Have you ever heard of any member of this trade traversing the right of the producer to call either the patent still whiskey or pot still whiskey by the name of whiskey or Scotch whiskey?—Never, until this prosecution arose.

9411. You say it should not be called Scotch whiskey unless made in Scotland?—It should not.

9412. If made in Scotland in a patent still and by the use of grain as well as malt, corn, or other cereals would you call that yourself, and do you think the trade would call it, whiskey?—I think so.

9413. You give examples of other products, but I do not trouble you with regard to them. I suppose you would not know much of the retail trade and what is the custom of the persons who buy retail?—Yes, that is a branch of our business.

9414. What would you say as to the way in which the blended whiskey should be dealt with? In the first place blending goes on now as we know to a very great extent?—Yes.

9415. Do you think the blending of whiskey is a beneficial production?—I do.

9416. Different blends have different proportionate compounds?—Yes

9417. Have you anything to say either accurately or roughly on what the proportion of the different whiskies should be in a blend?—No, my lord, I think that is a pure question of choice and of taste and of experiment. Some have totally different proportions of malt as compared with grain than others, and I think that as a general rule the malt whiskies are to be found more largely predominating in the West of Scotland—I think that was the case up to twenty years ago.

9418. Do you mean the malt whiskies predominating as self, or pure whiskey?—As self and as blends.

9419. Is there any difference in the proportions between the malt and the grain whiskies in Scotland in the blend?—Yes, in the West you will find that grain is not used to quite so large an extent as in the East of Scotland. That is a question of public taste.

9420 Almost an hereditary habit?—Yes.

9421. Did you find that when the patent still first came into more or less general use, or at least made an advance there was some prejudice against it?—With those who had not been using it—I speak of my own trade. My father, for instance, had a prejudice against what he called "patent." He always called it "patent."

9422. To what do you attribute that prejudice?—Because he had always been accustomed to use malt whiskey.

9423. Was it prejudice because it was invading the title of whiskey, or was it because persons had not used it?—No, it was the prejudice of taste and not the prejudice of what you would call the mind.

9424 Did you object to the patent still whiskey being called whiskey because it was not whiskey?—No, I never heard of that—not until the Islington prosecution.

9425. It was mooted in 1891, but you had not heard of it?—No, I had not heard of it. Of course it was a matter of consideration before the Committee in 1891.

9426. What was being mooted—I do not know whether it was being substantially mooted, but the question had been raised as to whether the cereals used so as to entitle the production to be called whiskey should be home grown and not imported. What do you say to that?—I say up to the abolition of the Corn Laws that was so in accordance with our laws and in accordance with our ideas, but after the abolition of the Corn Laws you could not, in the interests of protecting home agriculture, prevent any cereals which could properly make whiskey being used.

9427. I may be wrong, but is not this the practical question? I think Sir Robert Peel, before the Corn Laws were repealed, took the duty off maize—in 1845 or 1844?—There was some differential treatment given in the interest of agriculture.

9428. Before that time the duty on maize would have prevented its use?—Absolutely.

9429. You take the duty off, and now you get maize as a commodity that may be made available on account of its price?—Yes.

9430. Do you see any objection to maize being used to any extent?—I cannot see any objection if it produces the same result.

9431. We have had the term "grain whiskey" used. You do not treat grain whiskey as being patent still whiskey by virtue of being made in a patent still, but what is "grain" an abbreviation of?—"Grain" is an abbreviation of raw grain. It has now come to be applied to the patent still whiskey as a matter of commercial nomenclature, but it is not accurate to say that because it is patent still, therefore it is grain whiskey. We spoke of raw grain whiskey when whiskey was all made in the pot still,

and was made not from malted but from unmalted grain. That was the raw grain whiskey originally. It was made from unmalted grain in a pot still.

9432. Now the produce of the patent still is not necessarily grain whiskey; you may have malted whiskey made in the patent still as well as in the pot still?—Yes, it can be all malt in the patent still, I understand, but in practice it is a mixture.

9433. Therefore it is inaccurate to call the patent still product grain whiskey?—It is.

9434. It may be made of grain, but that is not the way it should be named according to your view?—Not necessarily.

9435. We have had put before us the view that this patent still whiskey ought to be called "spirits," and not called whiskey. Do you agree with that?—No, I do not think so. It is quite as much entitled to the term "whiskey" as any other Scotch product, or any Irish product, I think.

9436. The difference of the ingredients used is simply the practical one, as I understand it now, that in the pot still whiskey you do obtain as a rule more of the malt than you do in the patent still?—I think so.

9437. But apart from that greater degree of malt, the ingredients used are cereals, and are not in any way injurious to health, and have been known now, according to you, for a great many years under the name of whiskey?—That is my opinion.

9438. That is the case you represent—I do not say whether it is right or wrong?—That is my opinion.

9439. Do you wish, therefore, to see any regulation made as to what should be the contents of the mash tub?—Yes, I think that is where we have to look for what is whiskey.

9440. Let us have your view upon that?—I think some decision should be come to as to what the contents of the mash tub should consist of, and that the Inland Revenue officials should be charged with the responsibility of seeing that the regulations are carefully adhered to. The product, no matter how it is made, whether in a patent still or a pot still, should certainly be regarded as whiskey.

9441. But what should the Excise officers and the Excise Department see to according to you? Is it the proportion of malt that is in the mash tub, or what is it?—Whatever the Legislature lays down.

9442. But I want to know what Mr. Keith lays down first?—I think that is right. I think there should be a malt in the constituents of the mash tub, undoubtedly.

9443. But supposing it came to 10 per cent. or 20 per cent., do you wish that the Legislature should say that shall not be?—That would depend entirely on the opinion of experts in distillation.

9444. Are not you an expert after what we have heard to-day?—I am not an expert as a distiller, my lord.

9445. But that is your view? If it be thought right in any way to control the use of the word "whiskey" it should be done by legislation?—Yes.

9446. You speak very nicely about your want of practical knowledge, but as far as your knowledge goes, would you, by this proposed legislation, prohibit anything being used, or would you leave that to the free hand of the distiller, and then go on and say he must use so much malt?—I say he should be prohibited from using anything but cereals. I do not think that anything other than cereals should be used because that unquestionably is the historical genesis of aqua vitæ.

9447. Do you go so far as to say that if he uses anything but cereals the sale should be prohibited, or only the use of the process should be prohibited?—The spirit, of course, might be used for commercial purposes. You might have a spirit made from potatoes which might be of value in the arts and commerce, but it should not be used for drinking.

9448. It is really in order that the consumer should know what he is having that you would limit the use of the word "whiskey" to the article that is manufactured under separate conditions laid down by the Legislature?—Yes, my lord, that is how I put it.

9449. You are anxious, I believe, to deal with some of the analyses that have been used and put in in certain trials. I am sure you will excuse me if I deny myself the pleasure of going through those analyses with you and leave it to my colleagues?—Certainly, my lord.

9450. (*Dr. Horace T. Brown.*) In giving us this very interesting historical *resumé* you have told us that the Highland distillers were users of unmalted grain along with their malt?—Yes.

9451. Certainly in the year 1806?—Yes.

9452. That is a point of great interest because I have been searching for some time to see if any evidence on that point could be found. Do you know those Reports of the Select Committee of 1798 and 1799?—No, except from your own references to them to a previous witness.

9453. It would interest you very much to see those. There is a vast amount of information in them, and I was searching through them some time ago to see if any evidence could be got with regard to this very point of whether the Highlands at that time were using unmalted grain. There is abundance of evidence to show that the Lowlands at the close of the eighteenth century were using it, but I have not come across at present any reference to the Highlands use of it, which seems to me somewhat remarkable, as you appear to have got a very definite reference to its use a few years subsequent to that?—That is the Act of 46 George III., chapter 102, section 19, where the Highland distiller is called on every six weeks to give an account of the quantity of malted and unmalted grain used in the making of wort or distilling wash—indicating raw grain.

9454. That seems very specific with regard to the Highlands?—I think so.

9455. Some of your argument turned on the question of whether the two terms aqua vitæ and whiskey are absolutely synonymous?—I think there was, of course, the historical passing from "aqua vitæ," meaning brandy, to its application to the product of the Scotch distiller.

9456. But that is a possible weak point in the argument, is it not? If that could be attacked vitally, and it could be shown that those two words were not synonyms, it would to a certain extent weaken a great deal of your argument?—Unquestionably it would.

9457. You have given us your idea of what materials should be allowed for the manufacture of whiskey. Is it your opinion that malt should be an essential part of them?—Yes.

9458. That the conversion should be done by malt?—That is my idea.

9459. Do you know of any new process for converting the grain, the so-called "amylo" process in which malt is not used, but which produces a very good spirit?—No, I am not a scientist.

9460. You would not press that point of malt?—No, I do not think so.

9461. (*Dr. G. S. Buchanan.*) I notice that a great deal of your historical argument depends upon the use of a number of words in different Acts of Parliament. For example, you told us about the Highland whiskey, and that the words in the Statute applied to the materials which were to be used comprised the words "malt" and "unmalted," and "raw grain," I think?—That is allowed. Malt or unmalted means malted or raw grain.

9462. In that case the object of the clause was to make the Highland distiller give an account?—Yes, he is to give an account of the quantity used.

9463. It struck me with regard to that and some other similar cases that, after all, the usual drafting of an Act of Parliament is so as to make it comprehensive. Does it necessarily mean that all these things were used or used commonly? Does it not only mean that in drafting the Act the man who wanted to make sure that he had an account of malt, also, in the case of unmalted or raw grain being used, wanted to get that as well; but it does not follow necessarily that unmalted and malted and raw grain were all used or were common?—You have to try and get behind what is intended by the Legislature, and there is no doubt it was an effort made when there

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was a duty upon malt to cheat the Revenue of what it ought to get, and consequently they had to put a duty on both.

9464. I quite understand that, and what you have told us is of great interest; but I do not think we ought to strain too far the fact that a long series of materials are named in an Act of Parliament applying to the manufacture of a particular spirit as evidence that those things were used. It is a constant experience of Acts of Parliament that you have to provide for all sorts of likely and unlikely contingencies, and the naming of a large variety of materials is not evidence of the proportion or the frequency with which things are used?—I do not think we can strain it, but I think it is a reasonable inference when you find the phrase repeated, and to some extent amplified, that it was done for a specific reason, and that specific reason was that it was a custom of the trade that was required to be taken cognisance of. But I would not presume to strain it.

9465. Not necessarily a frequent custom, but something that might be done?—Yes.

9466. With regard to your argument that we should go back in deciding what is whiskey to the question what was whiskey, you would apply the same, I understand, to brandy. If you were deciding what is brandy in this country you would first begin by considering what was brandy?—Yes.

9467. You know from evidence we have had given here that in England at all events we have statutory authority for believing that the distillate of malt and corn in England was called brandy?—That is so, the presumption was that they were actually getting the same thing that the French people were able to supply from grapes; that they were able to supply that from malt. The statutes declared it so.

9468. Only forty odd years ago in the Spirit Act of 1860 there is a statement that: "All spirits which shall have any flavour communicated thereto, and all liquors whatsoever which shall be mixed or mingled with any such spirit shall be deemed a British compound called British brandy." When they are enquiring what is brandy one hundred years hence they might imagine, if they went back to that statute, that British brandy—brandy as we know it to-day—was anything that was compounded and mixed in that way?—That is British brandy. That, of course, was a preparation, a compounded preparation of spirit which, I think, was erroneously described as British brandy, but was nevertheless sold as British brandy, but always sold with the word "British" attached to it.

9469. That is not the same as the brandy distilled from corn which we are speaking of. The question for us is to a very large extent first as to the sort of meaning that should be attached to the spirit as at present sold?—Clearly.

9470. And brandy is now generally admitted to be solely the product of grape juice distillation, notwithstanding its historical origin?—That is its historical origin.

9471. Can you speak at all as to the sale of Scotch whiskey outside Scotland?—I can a little. We do send abroad.

9472. Do you think that historically and at the present time also the popularity of Scotch whiskey has been largely due to the Highland malt part of it?—I would not like to say that. I rather think the whiskey has grown in popularity since blended with grain. Our own experience is rather peculiar. We stock the malt whiskey almost exclusively, and we sent a sample case to some customers, especially those who come from the East, and we have had some whiskey returned to us from the South because it had an objectionable flavour, and that flavour was simply the flavour of very fine malt whiskey.

9473. At the same time do you think that outside Scotland the flavour that has been associated with Scotch whiskey has been to a large extent due to the malt whiskey?—I should like to think so, because personally my own taste runs in favour of malt whiskey, but in spite of that I have to admit that the popular taste is rather against my own.

9474. In the custom of your ordinary trade can you tell a Scotch whiskey from an Irish whiskey?—Yes, I think I could, but we always say in Scotland that we think the Irish whiskey has a sort of tallowy flavour.

9475. (*Chairman.*) That is much better than Scotch, is it not?—No—tallow is not so good as Scotch.

9476. (*Dr. G. S. Buchanan.*) If you had a couple of unknown samples that you knew nothing about, you would have little hesitation, I suppose, from your experience, in picking out those which were Irish and those which were Scotch?—Yes, if they were distinctive.

9477. We will put aside any samples which are mainly blends with a large amount of grain, and take the whiskies that are either pure pot still whiskies or blends containing a material part of pot still whiskey. Do you think an expert like yourself in these matters would be likely often to be mistaken in classifying the Irish from the Scotch?—I do not think we should be often mistaken, but we might be sometimes. I think the distinction between Irish and Scotch is so marked that any ordinary consumer would notice it.

9478. Do you think that in London, for example, the distinction between Irish and Scotch whiskey is solely a geographical distinction? Do you not think, as a matter of fact, when a man asks for Irish whiskey or Scotch whiskey he expects a distinctive flavour of something which is characteristic *qua* flavour?—Yes, I think so.

9479. I ask that question because it bears a little on the argument that you have given us. Practically the only distinction that I understand you would make between Irish and Scotch whiskey is that one should be made in Ireland and the other should be made in Scotland?—Yes, and, of course, the practice of the distilleries, which may be regarded as the Irish or the Scotch practice, will give the distinctive character to the whiskey.

9480. (*Chairman.*) Does water come in?—Yes, I think water has a good deal to do with it, or something to do with it, at any rate.

9481. (*Dr. G. S. Buchanan.*) Would you carry that as far as the grain whiskey of each country?—Yes.

9482. That the practice of the grain distiller in each case will give the distinctive Irish flavour and a distinctive Scotch flavour?—I think so.

9483. Do you really mean that?—I think some malt whiskey, when made in a patent still entirely from malt, would differ from a whiskey made from maize in a patent still, and if one distiller always made his patent still whiskey from maize and another distiller always made it from malt then you would always know the difference between those two distilleries.

9484. I do not think I have made my question quite clear. The consumer in England asks for Irish or for Scotch whiskey because he associates with those two a distinctive character in the matter of taste?—You must go further back than that. There is the presumption that he knows what Irish whiskey is and he knows what Scotch whiskey is, and therefore in ordering the one or the other he expects to get what he has been accustomed to. If an Irishman, who has been resident in Ireland most of his life, comes to London he wants an Irish whiskey of the character he has been familiar with. He would know at once if he was getting something different.

9485. Quite so, but do you think that applies also to a grain patent still whiskey made in Ireland and a grain patent still whiskey made in Scotland?—I do not think the distinction in flavour is so marked in grain whiskies. I am not sure I could distinguish between a grain Irish and a grain Scotch.

9486. (*Dr. Adeney.*) What would you call a blend of a Scotch malt and English grain?—I have no knowledge of such a blend. I suppose in London there must be plenty of it.

9487. We had evidence before us yesterday that there is such a blend, and that it was called Scotch whiskey. Would you agree with that?—No, I do not think so.

9488. (*Dr. G. S. Buchanan.*) That expert knowledge that you have with regard to the distinctions between Irish and Scotch whiskey you would not object to passing on to the public in the form of a label or notice on the bottle, would you?—There could be no objection to it, but the question is, is it necessary.

9489. You say yourself, I think, that you would have no objection—in fact, I think you advocate that

a certain meaning should be attached to particular words, and that the word "malt" should be only used where the produce is the guaranteed produce of malt alone, and the words "pot still" should be used when it is the product of the pot still alone, and the words "patent still" should be used for the product of the patent still alone, and "Scotch blend" to any whiskey made in Scotland?—Yes. My point there is that a fictitious description should not be passed at all, and that if they wished to describe it the description ought to be correct.

9490. Would you go further and say that a description in certain terms which are clearly defined or might be in future clearly defined, ought always to attach to the sale of whiskies?—I am not sure that I quite follow your question.

9491. Would you go to this extent, that you would not merely consider that these definitions should mean something—pot still and malt, and so forth, but that the public should be always informed whether it is getting malt or pot still, or whatever it may be?—I would have no objection to the public being informed. I do not say it is necessary, but I say to put a malt label on a patent still whiskey is fraudulent, and I should say that that is to be objected to. To say it should not be sold as Scotch whiskey without an adjective attached to it is to expect too much. I think they are both whiskey, but one is a malt and the other is not a malt whiskey.

9492. With regard to the analogy of butter which you have mentioned in your *précis*, do you, in your business, sell butter?—Yes.

9493. Do you sell butter that has been prepared from sweet cream?—Yes, after it has passed through a process of adding to it a culture or a butter yeast which is quite different from the old-fashioned custom of churning sour milk by which you produce the butter straightaway.

9494. Is that the special process you employ?—No, we do not make butter. I thought you asked if we sold it.

9495. Do you sell this particular butter as butter?—Yes, we sell both kinds of butter.

9496. Are you sure that the butter you sell is butter made from new sweet milk without any souring or fermentation before churning?—There is a fermentation to it, but I say the process is entirely different from the old-fashioned process. First of all the fresh milk has the cream extracted from it immediately or almost immediately.

9497. That cream is put into a separate vessel and is made into butter by adding a culture to it, and the butter is taken from that and you have it within twenty-four hours.

9498. (*Dr. Adeney.*) Is that a difference of scientific principle?—I think it is certainly.

9499. I cannot quite agree with you?—It is a complete distinction in the process of manufacture, and there is the distinction of a culture artificially which is totally different from the natural culture.

9500. I rather regard that as an improvement in the detail of process?—Precisely. I say that being so, and being an improved process, are you going to condemn the butter which you get, which is really probably a better article, although there is a difference of opinion as to which is the better.

9501. (*Dr. G. S. Buchanan.*) I only mention it because you refer to it in your *précis*?—The *précis* rather jumps to the conclusion without giving the intermediate processes.

9502. Are you aware of the requirements of the Legislature with regard to butter and margarine, and milk-blended butter?—Yes.

9503. You know margarine, which has fats probably as wholesome and as nutritious as butter, and which is flavoured with butter fat, and looks like butter, and tastes like butter, and yet the Legislature is insisting on a difference being made all the way through by a label?—It is a totally different extract.

9504. The same thing applies to milk-blended butter, which is butter with the addition of a certain amount of milk which gives it a particular flavour?—Yes.

9505. But at the same time the Legislature not only limits the extent to which the milk should be added, but it has denied it the name of butter?—I agree.

(Adjourned for a short time.)

9506. (*Dr. Adeney.*) With regard to your very interesting historical sketch as to the meaning of the word whiskey, do you not think the term aqua vitæ or the ancient term "uisque beatha" referred more to the stimulating properties than to flavour?—I think it referred to the substance; it referred to the spirit.

9507. That is, to the alcohol?—To the product.

9508. Not so much to the bye-products, but to the ethylic alcohol?—To the alcohol; to the spirit.

9509. But now we have come to regard whiskey as a specially flavoured alcohol, have we not?—I think we regard it still as a spirit derived from cereals.

9510. But having a characteristic flavour?—Of course the flavour naturally is characteristic of the substance.

9511. That characteristic flavour not only distinguishes it from brandy, but by the flavour you can sub-divide whiskies into Scotch and Irish?—Yes, and into North Country, Campbeltown, and Lowland.

9512. Which classifications all depend on flavour?—Entirely.

9513. And not on the principal constituent, namely, ethylic alcohol?—That is so.

9514. So that any phraseology referring in past times to this spirit can scarcely be taken now as dominating the position at the present day?—I rather differ from you.

9515. Does it not weaken your argument?—No; I differ from you. I think that the aqua vitæ was the spirit derived from the process of distillation, and you have to find, as I do, historically what the distillation was from.

9516. But in different countries you have had aqua vitæ?—Yes, aqua vitæ would seem to be a generic term applied to strong spirits.

9517. Obtained by distillation from certain materials?—Yes, it was in France applied to brandy, the distillation of the grape.

9518. In more modern times we can come closer to the subject and demand for whiskey that it shall be spirit obtained from certain materials?—Yes, I think that is right.

9519. I notice that you have made a restriction in the number of materials which you grant now in your mash tub. You do not grant sugar now?—No, I do not, and yet I admit that whiskey apparently was made from sugar in the beginning of the nineteenth century, and that it might still be made from sugar; if it were made from sugar in Scotland it might still be Scotch whiskey.

9520. So that you will have to modify the definition of whiskey that you have just given us?—What I would have to modify would be my constituents of the mash tub.

9521. But have you not narrowed your constituents of the mash tub to malt and cereals?—I have said so, but if you produce to me a spirit from sugar which has all the characteristics of Scotch whiskey, then I cannot see that I should prevent you using it.

9522. Does not that place your trade in great danger?—I do not know. I am not sure. The question is, can you produce from sugar a spirit with the characteristics of Scotch whiskey?

9523. We have had considerable evidence to show that the fundamental bases of whiskey are the materials used, those materials being cereals, and the water and care in carrying out the various details of the process?—Yes, I think that is so.

9524. So far as we know now, and so far as regards the legitimate development of processes, it would be natural to start with some basis, some foundation. Would you lay yourself open to having that foundation altered by allowing foreign substances into your mash tub, I mean substances foreign to the present practice?—If they were not foreign to what could have been established to be the ancient practice. That is my argument.

9525. You think the flavour would always dominate?—I think so. The flavour would dominate the product and dominate the situation.

9526. You would be inclined to rest upon that?—Yes, I do not think that the scientific right, so to speak, of the manufacturer should be unduly limited

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9527. I have only in my mind this, that somebody might succeed in flavouring with essences a foreign spirit, and produce something that would be quite like your Scotch whiskey. What would you say to that?—If it is a foreign spirit it should not get the title of Scotch whiskey. I should say it would be a fraud to introduce a foreign spirit and sell it as Scotch whiskey.

9528. If you took a very old grain spirit and wished to get the malt flavour—you might do that by the addition of an essence—would that be Scotch whiskey?—No, I think the addition of essences should be ruled out.

9529. Is that in the direction of natural improvements?—No, I do not think so. I think it tends to a possible fraud.

9530. (*Dr. G. S. Buchanan.*) Do you find no justification for it in any old Scotch Act of Parliament?—No, I do not find any justification for it.

9531. (*Dr. Adeney.*) You must have a beginning for these spirits, a distillation from some materials?—Yes, they ought to be distilled in the country which gives its generic name.

9532. You are rather singular in your opinions amongst your brothers in the Scotch trade, are you not?—I could not say.

9533. I think you are the first witness who would allow anything but cereals in the mash tub?—That may be so, because probably my neighbours have never studied what whiskey was originally made from, and if they had found, as I have, that evidently sugar was used in the beginning of the 19th century, they would have to modify their opinions.

9534. You have no idea what was the flavour of that spirit?—I have no idea, but if the flavour made it a spirit so utterly distinct from the flavour of Scotch whiskey, then of course the customer would immediately detect it, and he would say "This is not whiskey."

9535. I am afraid your trade does not extend beyond the limits of Scotland?—We sent whiskey to London. You might have it in this hotel if you asked for it.

9536. So that you have experience of the English taste?—Yes, I have had whiskey returned to me from London, which was about as fine a malt whiskey as we can supply, because they did not like the flavour of it.

9537. Have you ever had patent still spirit returned to you?—No, never.

9538. Have you ever sold it as Scotch whiskey unblended with malt whiskey?—No, not unblended with malt whiskey—never to England. I have sold it blended.

9539. When your English customers ask you for Scotch whiskey you do not send them patent still spirit?—We send patent still spirit blended, and we also send pure malt.

9540. Not unblended pure patent still?—No.

9541. You would not venture to put forward patent still spirit as carrying the characteristic flavour of Scotch whiskey?—Yes, because I find in my own district some people desire to have pure patent still whiskey.

9542. But is it not quite possible to get patent still whiskey in England anywhere, practically? It is not dependent upon water and materials so much, is it?—I think you will get patent still whiskey in England, and perhaps too much of it.

9543. But how would you protect any other patent still spirit from being sold as Scotch patent still spirit?—I am afraid you cannot protect yourself against fraud. You might declare it was a fraud, and to an honourable man the fact that this was declared to be a fraud would deter him from using it.

9544. My point is that apparently, so far as present possibilities are concerned, there is no chance of the Irish pot still being copied in, say, England, or of the Scotch pot still being copied in England?—Being copied?

9545. I mean the spirit being produced in this country?—I do not think there is anything impossible.

9546. But it is not done at the present moment?—Not to my knowledge.

9547. But there is a considerable quantity, you may accept it from me, of good patent still spirit produced in Ireland?—Yes, I know, because I have bought it

9548. You accept my statement?—Yes.

9549. Is that very distinct in flavour from the Scotch?—I do not say very distinct, but we think there is a distinction.

9550. Do you think the ordinary customer could distinguish?—No.

9551. Or could an intelligent customer distinguish?—No. I do not think the ordinary customer is a connoisseur.

9552. But a man who can afford to pay a decent price for a fairly good whiskey?—If he has been in the habit of sampling different kinds he would know what he likes.

9553. I do not mean an expert, but a man who likes a glass of whiskey?—The ordinary buyer, no matter what his position in life, gets used to a particular type of whiskey, and if he changed that type, no matter whether you give him something better or something worse, he naturally objects to it.

9554. What is in my mind is this, that it seems to me the Scotch trade are practically secure in the reputation of their better blends with malt and patent still and with their malt; but when you come to such a lightly flavoured whiskey as patent still whiskey—I mean produced from a mash containing a considerable portion of malt and cereals—when you do that you are likely to lose outside of Scotland that reputation for a distinctive flavour. That is my trouble?—Of course, it is our care naturally that we do not lose that reputation.

9555. And you do not entrust that reputation to patent still spirit?—Of course I do not.

9556. Do you know anything of Irish whiskies?—Yes, we have some Irish whiskies.

9557. Do you blend them?—Yes, we also blend.

9558. Do you take great precaution in getting Irish patent still spirit to blend with Irish pot still spirit?—Yes, we never blend with an Irish whiskey anything but Irish produce. It must be Irish produce.

9559. What makes me ask you is that we had evidence yesterday to the effect that, here in London, English patent spirit is blended with Irish and Scotch pot still whiskies and called Irish and Scotch whiskey?—I have no knowledge of it. We invariably make our Irish blend of Irish produce.

9560. I think you are anxious to make some remarks as to figures applicable to the analyses of samples made by Dr. Teed?—I have no anxiety to.

9561. I simply wish to give you the opportunity if you would like to have it put on the notes?—What I wish to say is that, taking Dr. Teed's analyses, and taking the whiskies that he analysed, we can make blends of the patent and pot still which will come up to the standard. In some cases of 50 per cent., half-and-half, you come up to the standard. In another case of 75 per cent. of one and 25 per cent. of the other, you still come up to the standard. If the question is to be an analytical standard, you simply open up the possibilities of doctoring, and to say that whiskey may be doctored and still may be pure, to my mind is demoralising to the trade.

9562. So that you would object to any definition controlled by a chemical standard?—I would unquestionably.

9563. That brings you back to your definition being taken from the contents of your mash tub?—I suggest, if there is to be a definition, that it is in the mash tub surely that it is to be found. I do not say that it should be defined, provided that you cannot allege injury to public health, but I start with the if—if it is to be defined.

9564. Do you not think legitimate trading and legitimate progress in processes should be protected too?—Yes, I think legitimate trading always should be protected.

9565. And legitimate progress too?—Yes, and that consequently to bar the patent still which is a scientific development is, to my mind, contrary to the principle you enunciate.

9566. But you still will not be definite as to the contents of your mash tub?—No, I would not like to be definite because I have not the information that would justify me in attempting to create a standard.

You, the members of the Commission, may have amongst the many witnesses the premises which will enable you to arrive at a just conclusion, but I have not.

9567. But whatever is done, the flavour must remain ?—Of course. I think you could not have whiskey without having the flavour of whiskey.

9568. The characteristic flavour?—Yes, there should be.

9569. Suppose a new and very palatable spirit were devised which could be produced more cheaply than Scotch whiskey, you would require that that spirit should be called by some other name than whiskey. You would not regard that as the result of a legitimate progress or development of the processes employed in the formation of whiskey?—I am afraid that is too hypothetical to enable me to come to a proper conclusion. If a new method of manufacturing whiskey were devised, an improved still, and the product had all the characteristics of whiskey, it should not be barred because it has been arrived at by a different process.

9570. But you insist upon the flavour?—I say the matter will speak for itself. It a person gets whiskey which has no flavour or which he is not accustomed to he would change it. I do not think spirits of wine for instance—potato spirit—should be sold as whiskey. That seems to me your position.

9571. Yes.

9572. (*Mr. J. Y. Buchanan.*) I want to ask you a question about the contents of the mash tub. Would you make it obligatory to have malt in the mash tub or allow fermentation without malt?—All I can say about that is that malt has historically been a constituent of the mash tub in the manufacture of whiskey, and that being so it seems to me that if you are going to have a whiskey which has the historical attributes of whiskey you must have malt.

9573. Would you put any percentage as the minimum percentage of malt?—No, because I am not in a position to speak upon that.

9574. There is a matter on which you have given some information which is rather interesting, that is the use of the words grain and raw grain, which I would like to hear a little more about. We have had several times the use of the word grain in a manner not very well defined. It is as to the distinction of raw grain?—I may point out that the Act 38 George III., chapter 92, Section 7, obliges every distiller to give every week a Declaration of the respective quantities of malt and of unmalted grain used by him. Then Section 8 enacts "that all barley, beer, big or other corn or grain which shall be used unmalted or raw for distillation in Scotland should pay the like duty that malt now pays. I think that is one of the sections upon which I found my argument or statement, that obviously raw grain was used for the manufacture of whiskey in 1798.

9575. What I wanted to know was this: As a distiller, when you speak about grain whiskey you mean a whiskey that is made without malt?—I am not a distiller, of course. I am speaking merely historically that whiskey was made obviously from raw grain as well as from malted grain.

9576. But when you spoke of raw grain you meant grain without malt?—I meant grain which was not malted.

9577. (*Dr. Cushny.*) You say that Scotch whiskey is a spirit made in Scotland from malt and water with this special flavour?—Indigenous to Scotland.

9578. And that this can be diluted with more alcohol—patent still spirit?—Yes, I think that is really the use that is made of patent whiskey.

9579. I do not understand why you should object to its being diluted with patent still spirit made in another place?—Because, if it is to be sold as Scotch spirit or Scotch whiskey, it should certainly be the produce of Scotland. If it is to be sold as Irish whiskey it should be the produce of spirit made in Ireland. It cannot be said to be Scotch whiskey if it is half English and half Scotch.

9580. Supposing you sent to London a barrel of malt whiskey a little over proof and the London publican diluted it with London water, do you think it would lose its character of Scotch whiskey?—No, I think not, because the Legislature has admitted the right to the seller of spirit to sell it down to 25 u.p., and further, it presumes the right of the trader to dilute his whiskey under that.

9581. But you regard both the patent spirit and water practically as dilutants of malt whiskey, and you admit London water, but object to London patent spirit?—I would assume if you take a glass of Scotch whiskey with a tumbler of soda water made in England you would still think you were drinking Scotch whiskey. If you were drinking a whiskey and soda with Scotch whiskey the whiskey is certainly a constituent of the whiskey and soda.

9582. (*Chairman.*) You do not seem to approve of that blend?—Not of English spirits.

9583. (*Chairman.*) Will you kindly hand in the Acts of Parliament to which you have referred? (*Handed in. See Appendix H.*) You believe the contents of it are correct?—Yes. I wish to hand that in. I believe on my soul and conscience that it is absolutely correct.

9584. (*Chairman.*) You have the pleasure of knowing that it will go on the notes?—Thank you, my lord.

The witness withdrew.

Mr. JOHN LYON, called.

Mr. J. Lyon.

9585. (*Dr. Bradford.*) What is your trade?—I am a licensed grocer.

9586. How long have you been carrying on that trade?—On my own account for 31 years.

9587. You have, in addition to that, several other posts? You are a director of the Scottish Trade Protection Society?—Yes.

9588. You are chairman of the Grocers' section of the Scottish Licensed Trade Defence Association?—Yes, I am.

9589. In the course of your trade have you been in the habit of blending whiskey?—Yes, I have blended for 29 years.

9590. You blend whiskey yourself, do you not?—I do

9591. In addition to that, what other whiskies do you retail?—I retail any whiskey that the public wish.

9592. Some of them are so-called proprietary whiskies?—They are.

9593. Do you confine your trade to Scotch whiskies?—No, I have sold, and still try to sell, John Jameson's Irish whiskey.

9594. You have a certain trade in Irish whiskies?—I tried to make a trade. I was very anxious to see whether a good Irish whiskey would sell or not some 20 years ago, and I bought then, and for some years afterwards, a small quantity of Jameson's whiskey in wood from their agents in London who had control of the supply of Irish whiskey in the kingdom.

9595. Are we to understand when you first went into business you had no Irish trade, and you did not sell Irish whiskey?—That is so.

9596. And then you started it?—Then I started it.

9597. You have not such a large trade in Irish whiskey as in Scotch?—No. I should not be able to pay my licence if I depended on my sale of Irish whiskey.

9598. I should have asked you this before. Where is your business?—At the west end of Edinburgh.

9599. Do you think your experience as regards Irish whiskies is exceptional?—I think not in a locality such as Edinburgh. There are some manufacturing districts in the west where I understand there is a much larger demand for Irish whiskey.

9600. Then as regards these proprietary blends that you retail, I presume that was to meet a public

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demand?—Yes, sometimes that demand is created in rather a funny way I may tell you. Sometimes a member of a firm who wish to push a particular blend may come to reside in the locality and order from half-a-dozen or so different people two or three bottles of a particular whiskey. I have heard of that case.

9601. But still we may take it there is a large trade in these proprietary blends?—I cannot say that it is a large trade in Edinburgh.

9602. In what variety of whiskey is your own trade?—My own blend entirely.

9603. A blended Scotch whiskey?—A blended Scotch whiskey.

9604. Is that a blend of a malt and grain?—Yes, malt and grain.

9605. I presume you have a number of different blends—different percentages?—Yes, I have one blend entirely of Highland whiskies, but it does not sell retail, and I use it again for re-blending.

9606. The bulk of your sale is a blend of Highland whiskey with grain?—With Lowland malt and grain.

9607. All three?—Yes, all three.

9608. Could you tell the Commission what range there is in the percentage of malt whiskey in these different blends?—Yes.

9609. What is the range? What do they vary between?—Between 35 and 50.

9610. 35 per cent. of malt is the lowest percentage in a blend?—Yes.

9611. That is 35 per cent. of Highland and Lowland?—Yes.

9612. Not 35 per cent. of Highland?—No

9613. Have you any great trade in pure grain whiskies?—Not a great trade, but we do sell the pure grain occasionally.

9614. That does not compare in amount with the other?—No, not at all.

9615. Have you, in the course of your experience of the last 29 years, noticed any great change in the public demand as regards the character of whiskey?—No, I cannot say there is, but I think there has been a tendency on the part of all blenders to improve upon the quality of the whiskey.

9616. Was there much blending when you first went into business?—No. When I was in my father's place as a youngster there was practically no blending.

9617. The sale was practically in self whiskies?—They were nearly all self whiskies. Then there came a blending which you could not call blending at all, it was a mixing of one or two kinds put together and used immediately.

9618. You draw a distinction between mixing and blending?—Yes. That is what I refer to. I think that whiskies of different kinds put together require a considerable time before you are able to destroy or neutralise the special flavours of each. There is a tendency to blend, and we reckon about three months for the mixing of whiskies.

9619. Do you mean you think there is some slow continuous process going on in the mixed spirits?—Yes. They seem to amalgamate more thoroughly together. You lose the distinctive character of different whiskies.

9620. And that takes time?—It does.

9621. Has there been any change on the part of the public as regards the liking for an older whiskey?—Yes, I think there has. There has been a tendency of late years to push up the age of whiskies, and it seems to me, with the approval of the public. We are now much more often asked for a ten-year-old whiskey than we were six or eight years ago.

9622. You think the public has been educated to that by the trade?—I think so.

9623. Do you think that blending has been of advantage to the public?—Undoubtedly, an immense advantage.

9624. In what way?—You get sometimes, and almost always, the desired body that you wish, a much finer flavour than you could get in almost any single whiskey.

9625. Would it be correct to gather from your statement that there is much demand for self whiskies of any kind at the present time—I mean as far as your own trade is concerned?—As far as my own trade is concerned, almost none at all.

9626. No self whiskies of any kind?—No self whiskies of any kind.

9627. You state in your *précis* that the blending of whiskey in bond is of the greatest possible advantage to dealer, retailer and consumer?—Yes.

9628. Would you just elaborate that a little, and explain to us what you mean? How is it to the advantage of the dealer, for example?—In this particular way it is an advantage to the dealer because he, by his skill, may have created such a blend of whiskey that no other one is particularly able to follow.

9629. How is it an advantage to the retailer?—It is an advantage to the retailer from the fact that he may clear one cask of blended whiskey, which will meet the requirements of his business; whereas in the old days, unless he sold single whiskies, he had to blend in his premises, which first of all requires room, and then also there was a greater amount of outlay for duty.

9630. Finally, how is it an advantage as regards the consumer? What do you say?—I think the consumer gets a whiskey that pleases him better than he could possibly get otherwise.

9631. My point was rather this: how does the question of blending in bond affect the consumer?—As I have already pointed out, you have had the extra time whereby these spirits are rounded and made smooth, and I should think after lying a year or two years it is a very much better spirit than could possibly be got otherwise.

9632. I suppose your point is that the cost is less in bond than if it is done out of bond?—It is, and of course you could mix many different kinds. As I say, I have that blend of Highland malt whiskies which consists of whiskies from five different distilleries. I use part of that blend of Highland malts along with three Lowland whiskies for making a blend for the public consumption. Therefore I think it is very much better.

9633. As arising out of this, how would you calculate the age of the blend? How do you arrive at that?—By the average.

9634. Simply by the average?—Yes.

9635. Do you take into consideration at all the quantity—the volume of the various whiskies used?—Yes.

9636. You take that also into consideration?—Yes.

9637. Now as regards the labelling of these whiskies. What has been your custom as regards the labelling of your whiskies?—I have never called my whiskey anything else than Scotch whiskey. I never have used the word "malt" either in price lists or on labels. I have price lists of 1880, 1892, and 1905.

9638. You have simply called them Scotch whiskey?—Yes.

9639. But some of these blends are mixtures of malt with a considerable quantity of grain spirit?—Yes.

9640. And others are blends of different varieties of malt, are they not?—Only one.

9641. Are those similarly labelled?—They are all labelled the same.

9642. Do you think it is of any importance to the public that the consumer should be told that the whiskey he is drinking contains a malt whiskey?—I do not think so.

9643. You are simply blending that all as Scotch whiskey?—Yes.

9644. You would not draw any distinction according to the amount, the percentage, of malt whiskey present?—I think not.

9645. Would you label a pure grain spirit as Scotch whiskey?—I would if it was made in Scotland.

9646. What is your view as regards what would determine the term Scotch whiskey?—Whiskey made in Scotland.

9647. You do not mind what it is made from?—Yes, I do. I think I say in my *précis* that it ought to be made from cereals. I should not like to see roots used in the manufacture in Scotland.

9648. It should be made from cereals and made in Scotland?—Yes.

9649. Now with reference to the keeping of whiskey, and an age limit. You are in favour of an age limit, I understand?—I am, but I have made a suggestion.

9650. I will come to that in a moment. You are in favour of an age limit?—I am.

9651. Would you select any arbitrary age?—Not less than two years.

9652. You consider that whiskey younger than two years is injurious?—I think that is my own experience.

9653. That is your own experience? You have seen injurious effects from it?—Yes. I may be wrong, but I fancy that my digestion has been affected by drinking a little whiskey that is rather new.

9654. You are alluding to your own personal experience?—Yes.

9655. You make some suggestions in your *précis* with regard to the duty that should be paid on whiskies?—Yes. I wrote to the Chancellor of the Exchequer.

9656. Would you tell the Commission shortly what your suggestion is as regards that?—I thought at the time that the duty should be varied according to the youth of the whiskey ——

9657. That the younger whiskey should pay a higher duty?—Yes, that the younger whiskey should pay a higher duty. As I say in my *précis* that would enable those who wished to get new spirit for any particular purpose, or to provide the bite which I see some witnesses have been speaking of here. If they wished to give people a bite they would have to pay a little more for getting that.

9658. I will leave Mr. Guillemard to deal with that side of the question. Do you think that all whiskey, including grain whiskey, improves by keeping?—Yes.

9659. So that you would make your age limit apply to all varieties?—I would.

9660. (*Mr. Guillemard.*) With regard to the last point, I notice that the further suggestion you made involved a loss of revenue. I do not know what answer Mr. Asquith made to you. Was he unsympathetic?—No, he acknowledged the receipt of the letter.

9661. Which was what you might call non-committal?—Yes.

9662. Is it vital to your scheme? You start with a duty, and you knock off bits of it as the thing gets older?—Yes.

9663. Would it equally meet your view—I have no doubt it would meet Mr. Asquith's view better—if you started with the duty a little higher and knocked it down at its lowest point to what it is now?—Would there be any difference?

9664. Yes, there would be a great difference from Mr. Asquith's point of view. Would it be the same thing from your point of view?—You mean from the present rate of duty?

9665. I mean graded up instead of down?—It is six of one and half-a-dozen of the other.

9666. It would be all right from your point of view?—Yes, much the same. I cannot see what the difference is.

9667. Cannot you see it from Mr. Asquith's point of view?—No.

9668. At present your suggestion is that some whiskey should pay 11s. and some 9s.?—Yes.

9669. I suggest you should put it in the form that some should pay 11s. and some 13s.?—It is a question of scale.

9670. Are you contending only for some scale?—Yes. You are speaking of the matter of volume?

9671. Yes?—That would be more for Mr. Asquith. If it is going up in that way it would so affect the sale of whiskey that he would lose more than he gained.

9672. (*Dr. G. S. Buchanan.*) Do you sell whiskey in Edinburgh over the counter or only in bottle?—According to the Scotch certificate we are entitled to sell in any quantity.

9673. Do you sell it by the glass?—We do not sell it by the glass but we can sell it by the gill, but not for consumption on the premises.

9674. Can you sell it by measure to be drunk on the premises?—No, we have no consumption on the premises.

9675. In the case of the bottles, those are in each case labelled as you have told us?—Yes.

9676. And labelled Scotch whiskey in all cases?—Yes, except, of course, when it is Irish whiskey.

9677. When you sell by the bottle do you label it in bond?—I do not do so, but it can be done quite well.

9678. You bottle in bond?—No, I do not, unless it is for shipment abroad.

9679. You blend in bond, and bottle outside?—Yes.

9680. Would it be of any advantage to your business or to the trade generally if you could do what some witness advocated, that is, reduce the whiskey in bond—add water to it in bond?—Yes, in many cases it would be a help, but we have no particular need for it. It would add to the cost of the article because you would have the bond expenses to pay, and the labour, apart from your own expenses, which would make it dearer.

9681. (*Dr. Adeney.*) Would you have to pay on the handling of the increased bulk?—Yes.

9682. (*Dr. G. S. Buchanan.*) On any of your whiskies do you declare on the labels the alcoholic strength?—Only on one I have, which is 33 per cent. under proof, and that is declared on the label, but all the others are stronger than the limit of 25 degrees below proof.

9683. (*Dr. Adeney.*) You say that you were disappointed in your efforts to push John Jameson's Irish whiskies amongst your customers?—That is so.

9684. That was not a singular experience with reference to pot still whiskies? You had the same experience with Scotch pot still whiskies?—We never tried it until just of late years.

9685. Did I gather from you that you were not selling much of the self Scotch whiskies?—That is so.

9686. Not of pot still whiskies?—That is so.

9687. You had a similar experience with them?—Yes.

9688. There was no singularity in your Irish experience?—That is so, but I expected to sell much more of Irish from the character of John Jameson and from the way I liked it myself.

9689. You no doubt liked the malt whiskies of Scotland?—Yes.

9690. Did your customers differ from you?—As a rule.

9691. Have you tried to sell blends of Irish whiskey?—No.

9692. (*Mr. J. Y. Buchanan.*) You have told us that when you started in the trade you sold mostly self whiskies?—That was when I was a lad in my father's shop.

9693. And now you sell hardly any?—That is so.

9694. It is almost all blended?—Yes.

9695. Have you observed at all that the whiskey which the public demand is steadying, as it were, into a certain type—I mean that they generally take a certain type of whiskey, and that the extremes are being separated out?—Yes. I think I had a very good instance of that lately. A gentleman who came from Morayshire asked me for a good whiskey, and knowing where he came from, I thought he would like this blend of old Highland malts, so I sent it to him. The next time he called upon me he said: "Now, I do not want that whiskey, it is probably very fine, but I cannot stand it, it is much too heavy for me." I was disappointed because I thought I was going to meet his taste by giving him Highland whiskey.

9696. What did he like?—The blend.

9697. The blend of malt and grain?—Yes.

9698. Do you think in that way in your experience the type of whiskey which meets with general approval is steadying into something like the type of brandy? There are, of course, different classes of brandy, but I mean that the two would be comparable? If you were selling brandy you would have different classes of brandy, as you have in whiskey different classes of whiskey; but you would find that your customers as a rule took a certain definite type of brandy as you think they do a whiskey? I would like to know whether your experience points in that way?—I do not know that I quite apprehend your question, but as was alluded to by Mr. Keith, the liking for

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whiskies in the west is more pronouncedly in favour of flavoured whiskies than it is with us in the east.

9699. What I meant was, would the margin be greater in favour of whiskies than it is in brandies? Can you form an idea on the subject?—People in Scotland do not buy brandy for drinking purposes; it is generally for medicinal purposes.

9700. I do not think you follow my question. Supposing you were in France and they took brandies—there are various brandies—no doubt it steadies into a blend. Do you think whiskey is steadying as nearly into a general blend as brandies have done where they drink brandy?—I do not think it is possible to speak of the products of the different forms as a general blend. Blending is general, but I do not think you could say there is any particular similarity.

9701. You do not think it has gone that length?—No.

9702. (*Dr. Adeney.*) Do you think the question of the cost of self whiskies as compared with blends has influenced the trade at all?—I do not think so. I do not think they like them at any price.

9703. Were you able to sell those Jameson's whiskies at the same price as you sold some of your blends or any of your blends?—Practically. I thought it was a dear whiskey to start with, but on my price list I have here, the 10 year old John Jameson's—it is now rather more than that—we sell at 4s. a bottle.

9704. You do not think that the taste of the public has followed the direction of cheapness?—I think not.

9705. It has been a change of taste?—Yes.

9706. (*Dr. G. S. Buchanan.*) It has followed the direction of the greater profit to the seller?—Not necessarily, I think

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

EIGHTEENTH DAY,

Wednesday, 20th May, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. R. Bowes.

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Mr. ROBERT BOWES, called.

9707. (*Dr. Adeney.*) You reside, I believe, in North Frederick-street, Glasgow?—Those are my business premises.

9708. You are a wine and spirit merchant in Glasgow?—Yes.

9709. How many years have you carried on your trade?—Since I was first licensed as a grocer in 1872.

9710. How long did you carry on business as a licensed grocer?—About thirteen years.

9711. How have you been engaged since the year 1880?—I carried on the grocer's business along with the spirit shops.

9712. Have you any public-houses in Glasgow?—I have only two now, but at one time I had four.

9713. What classes of whiskey do you sell?—The ordinary blended whiskies.

9714. Is that Scotch whiskey?—Yes.

9715. Do you sell Irish whiskey?—Yes, a little.

9716. You do not sell pure malt or pure grain spirit, do you?—I do not sell any pure grain. It is all blended whiskey.

9717. Do you sell any pure malt?—No, I do not sell any pure malt.

9718. Can you give us any idea as to the proportions of malt in your blending? I do not want to press you for an answer if you prefer not to give it?—I have no objection to tell you. Some contain two-thirds of malt and one-third of grain, and others have four-fifths; it depends on the price.

9719. Four-fifths of malt do you mean?—No, four-fifths of grain against one-fifth of malt. That is for a 6d. whiskey—the cheap whiskey.

9720. You have 80 per cent. of grain?—Yes.

9721. What is the difference in price?—Do you mean the cost price?

9722. I mean the proportion?—There may be about 1s. a gallon difference in price.

9723. I see from your *précis* you have dealt in Cambus whiskey?—Yes.

9724. That is a pure grain whiskey?—That is a pure grain whiskey.

9725. But you have not sold much of it?—Not singly.

9726. You use it for blending?—Yes.

9727. Do you blend yourself?—I blend it all in bond. It is blended according to my own instructions. I send in so much whiskey of each kind.

9728. Do you think yourself it would be a practical impossibility to limit the proportion of malt whiskey in a blend in order that that blend should be called Scotch whiskey?—I think so.

9729. You do not think it is practicable?—No.

9730. And you would not desire it?—So far as I am concerned it is not wanted very much, but I think it meets all the requirements of the case by calling it Scotch whiskey. They are all Scotch whiskies as well as the pot still whiskies.

9731. Do you attempt any classification of these whiskies for the information of the consumer? Would you distinguish a malt whiskey from a grain whiskey or a blend containing a considerable portion of malt?—No, because I do not think it would be any benefit to the consumer.

9732. Provided he gets his spirit at a fair price?—Provided he gets a particular spirit that suits his taste.

9733. And at the same time, if his taste goes in the direction of a cheap spirit, he does not pay the price of the dear spirit?—He certainly does not. If he pays 6d. a gill for whiskey he does not pay at the rate of 10d.

9734. What do you supply to your consumers when they ask for whiskey?—The blended whiskey.

9735. When do you supply Irish?—When they ask for Irish we give it to them.

9736. What do you give?—We give what we get—a blend. I have never kept any individual whiskey of Irish manufacture or Irish distillation.

9737. You do not blend that whiskey yourself?—No, I get that from Ireland already blended.

9738. Is that blended in accordance with your instructions?—No; I get it blended because it is a very small item of my business altogether.

9739. I suppose you have some Irish customers and they ask for it?—Sometimes Scotch people like it.

9740. Do you think a man who buys a glass of whiskey over the counter and asks for whiskey knows he is getting a blend?—I believe about 95 per cent. of the customers who come in know perfectly well they are getting a blended whiskey.

9741. And they would prefer that to getting a pure malt whiskey?—My experience is that those who get pure malt whiskey do not like it at all.

9742. If they want a pure malt what would they ask for?—They might come in and say: "Have you any Glen Grant?"

9743. They would ask for some designation?—Yes, such as any particular distillery probably, say, Ardbeg for example.

9744. Do you sell any of the proprietary blends that we see advertised in London?—No, the only one I keep is Henry Thompson's, which is really an inheritance of one of my shops. When I bought that shop it was still there and I kept it on. I sell very little of it.

9745. What would be your definition of whiskey?—From the distillation, do you mean?

9746. Yes?—So far as I have been able to ascertain, pot still whiskey is made from malt, malted barley and probably a little raw cereals such as corn, bere, etc.

9747. Would you allow the term "whiskey" to be applied to the spirit obtained from the patent still?—Yes.

9748. Would you put any limit on the materials used in the patent still?—I think about 25 to 30 per cent. of malt.

9749. What about the other materials used in the mash tub for the patent still?—I understand maize and other cereals.

9750. You would not allow sugar?—I do not profess to have entered into that.

9751. I see from your *précis* that when you commenced the business in 1872 you blended Islay and Campbeltown?—Yes.

9752. Has your experience shown that you had to make a change?—Yes, a lot of customers were complaining of the nauseous flavour and the higher taste, the peat, and so on. I suppose you would term them ethers.

9753. You had to alter your blend to meet the change in taste, do you mean?—Yes.

9754. It was not to meet a reduction in the price?—No.

9755. It was really to meet a change in taste?—Yes.

9756. Can you tell us the minimum age or the average age of your blends? I do not want to go too closely into the secrets of your business?—I have no hesitation in telling you. I unfortunately hold a large stock of whiskey of 1897, 1896, and so on.

9757. What would be the average?—About seven years old.

9758. How is the patent still whiskey known in the trade in Scotland to your knowledge?—The patent still whiskey is known as Cambus or Cameron Bridge.

9759. That is a particular patent still?—Yes, those are different distilleries.

9760. But how is the patent still spirit generally known in the trade to your knowledge?—Just as grain whiskey.

9761. How do you term grain whiskey yourself in your own catalogues?—Just "grain whiskey." Under the heading of "grain whiskies" of course various distilleries are designated.

9762. Do these vary in value according to age?—Yes.

9763. Do they vary much in value?—Yes, they have increased in price very considerably.

9764. Can you give us any idea what is the increase?—In some instances I have got as high as 10 per cent. on some of the whiskies, and some more.

9765. What age is that 10 per cent. calculated on?—It depends on when you turn it over. If you turn it over in three years probably it is 10 per cent. per annum; but now you cannot get 3 per cent. Some was sold at a loss a short time ago after paying rent.

9766. That is an accident owing to the conditions of the trade?—Yes.

9767. Does the patent still spirit improve in quality by ageing?—Yes, it does.

9768. Do you think you could distinguish between Scotch patent still spirit and an Irish patent still spirit?—I would not like to say I could. I have seen some Irish patent still spirit that was coming very near to what you may call some of the Scotch patent still whiskies.

9769. And there is good patent still spirit produced in London, is there not?—I could not tell you. I never saw any of it.

9770. So that although it may be claimed for the patent still whiskey that it is not flavourless, still it is not characteristic?—Oh, yes, there is a characteristic about it.

9771. But it is not sufficiently characteristic to enable you easily to determine whether it is Irish produce or Scotch produce?—I have never given my attention to that so very much.

9772. Would you agree to a limit of age for all whiskies?—Yes, I would agree to a limit of age.

9773. Do you think that advisable?—Yes, very advisable.

9774. Do you think that would prejudice or be in any way a disadvantage to the trade?—I do not think it would be much of a disadvantage except to some of them who wanted to use whiskies new.

9775. You would prefer not to see new whiskies used?—Yes. I would prefer to see the whiskey over two years old, if not three.

9776. That is for the benefit of the consumer?—That is for the benefit of the consumer and for the benefit of the trade generally, I think; but I may say if that is done there is a small matter that would have to be considered. Sometimes we have found, for instance, a porous stave would occur, and we are ordered by the Excise to remove it. If it came in before the time limit, what are you to do with it?

9777. I see from your *précis* you would consent to labels notifying to the public that the bottles contained a malt whiskey or a grain whiskey or a blend?—Yes, that is if you are going to use grain whiskey alone.

9778. Do I understand that you would agree to labels showing a certain classification of Scotch whiskey which may be either a malt whiskey or a grain whiskey or a blended whiskey?—No. I think the public are sufficiently informed if they get a selection of good old Scotch whiskey without distinguishing the malt whiskey or anything that is in the blend.

9779. But how would you convey that information to the consumer?—I think the consumer would be perfectly well aware of the fact.

9780. But you would not put a label on the bottles?—No, I would not put a label on the bottles saying so much malt or so much grain.

9781. I am not asking you that question, but supposing, taking your own *précis*, that the bottles contain a malt whiskey or a grain whiskey or a blended whiskey, ought the consumer to be given that information by means of a label on the bottles? Do you

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understand my question?—I can hardly follow what you mean. You mean whether you would have "grain whiskey" put on the label or not?

9782. You would not object to the term "grain whiskey"?—I would not object if it was really grain whiskey, but I should certainly object if it was a blend of malt and grain.

9783. If it was a blend of malt and grain you would not object to the word "blend"?—A blend of Scotch whiskies.

9784. You would not object to it being labelled malt if it was wholly malt?—No.

9785. But I understand you would object to putting proportions of malt and grain in the blend?—Certainly.

9786. Have you ever known of potato spirit being used in the Scotch whiskey trade?—I have heard about it, but I do not know anything about it myself.

9787. You would object to it?—I certainly would.

9788. (*Dr. Horace T. Brown.*) You were speaking about the ageing of whiskey. What is the minimum age desirable for a malt whiskey, do you think?—I think it depends very much on the style of malt whiskey you use. For instance, Ardbeg whiskey would take a longer time to mature than a lighter made whiskey from the north country.

9789. Take the average Highland whiskey?—Not less than from three to four years old.

9790. But you would not propose to put on a limit to that extent?—Certainly not.

9791. But at the same time you think it is not desirable that it should be consumed until it is three or four years old?—I do not say it is not desirable to be consumed, but so far as I am concerned myself I should prefer the whiskey was of that age before I would use it.

9792. Would you impose the same limit on grain whiskey?—No, I do not think I would. I think grain whiskey matures much quicker than malt whiskey would.

9793. But you would have to treat them both alike, would you not?—No, I do not think so.

9794. You would like to see a different limit of age put on malt whiskey?—Not a different limit. I say over two years for all whiskies.

9795. Including grain?—Including grain.

9796. Do you think grain whiskey requires maturing for two years before being fit to drink?—I think it is the better for it.

9797. Are you not rather handicapping the grain whiskey for the sake of the malt whiskey?—No, I do not think so.

9798. (*Dr. G. S. Buchanan.*) Glasgow is very largely a centre of business for whiskey, is it not?—Yes.

9799. The Glasgow public know a good deal about malt whiskey and grain whiskey?—Do you mean the ordinary customers?

9800. They know more about it than, we will say, the people in London?—I do not know what the London people know about it.

9801. There are distilleries in and about Glasgow, and whiskey business of one sort and another being transacted very largely in Glasgow?—Yes, I believe the general public know a great deal more about whiskey than the public in London do. It seems to me the London people have to take what they get in a great number of instances.

9802. We have had evidence given before us to the effect that whiskey was sold as old Scotch whiskey in London which was new grain whiskey with 10 per cent. of malt whiskey. Would you regard that as a satisfactory specimen of Scotch whiskey?—No, I do not think I would.

9803. Your cheapest blend, I think you tell us, would contain about one-fifth of malt whiskey, and have age both in the malt and in the grain?—Yes, the average is about three years old.

9804. That "old Scotch whiskey" that was sold in London in that way we were told was 35 under proof. Is that a dilution that is common in Scotland?—No.

9805. It was protected by a label?—It may be, but I do not know of any spirit merchant in Glasgow who would sell whiskey anything like that. About 22 or 23 under proof would be the very most, and that only for the cheapest blends.

9806. You have your whiskey blended for you in bond?—Yes.

9807. By your own instructions?—Yes, by the quantities I send in.

9808. And you also blend yourself in your cellars?—Yes, I may add something else to them after they get back to my cellars.

9809. Could you say, with regard to what you blend yourself in your cellars, if you always know what the contents of a particular cask are in regard to the amount of malt whiskey in it?—Yes.

9810. You would know that?—Yes, I know what is put into it.

9811. Would you ever have that recorded in your stock book?—No, it is not recorded in the stock book at all. You get your permit from the Excise or the Customs people, and you enter it as you get it there—so many gallons of whiskey at a certain strength.

9812. But for the purposes of your own business, apart from the Excise altogether, if you mix whiskies in your own cellars do you keep any record as to what you mix at any particular time?—You mean to say, do I keep a note of the blend?

9813. Yes?—I simply put in a little extra fine malt to create a better impression if I think the whiskey is a little thinner than I like it.

9814. One witness told us it would be a convenience if reduction of whiskey was allowed in bond. Have you any observations to make on that point?—I think I would object to that.

9815. On what ground?—I think it gives the bond store keeper too many facilities.

9816. It would tend to drive all blending into bond?—I do not think any person would be inclined to do that, because he would require to pay store rent on water, and I do not think that is necessary. I would not do it.

9817. The witness meant reducing in bond before the whiskey came out?—Yes, if it was reduced at the time it was blended and put in, that is all the advantage I can see in it.

9818. One question with regard to malt whiskey. If any of your customers want a malt whiskey you say they would ask for it by the name of a particular distillery that they happened to know?—Yes.

9819. Is it your practice to advertise or to push malt whiskey from the particular distilleries?—Do you mean to say to exhibit them in my shops?

9820. Yes?—No.

9821. (*Dr. Adeney.*) How does the blend of Irish whiskey that you get compare in price with your Scotch blends?—The blend that I get just now I can buy a little cheaper than what I make my Scotch blends from.

9822. It is cheaper?—Yes.

9823. Appreciably cheaper?—Not very much.

9824. What is your opinion as to its quality?—It is a very good whiskey that I get.

9825. Would you drink it yourself?—I prefer Scotch.

9826. Have you any idea of the proportion of malt?—No, I have not.

9827. You could not judge that from the price you pay?—No, I do not think I could judge it from the price I pay.

9828. Are you satisfied that it does contain malt whiskey?—Yes, I am satisfied it contains a proportion, but what it may be I cannot tell you. I do not think it would be more than one-third.

9829. (*Mr. J. Y. Buchanan.*) Could you tell me what you mean by this sentence in your *précis*, "Since 1880 I have carried on solely the business of an 'On' wine and spirit merchant"?—That means drinking on the premises. With a grocer's licence you cannot consume on the premises.

9830. One of your public-houses is in North Frederick-street?—Yes.

9831. Where is the other?—In Rutherglen-road.

9832. A very different locality?—Yes.

9833. Is there any difference in the whiskey drunk in those different places?—No, they are just removed

out of bond and reduced. It is the same class of whiskey. I may not use the higher class, such as my "Four Star" whiskey, in that locality because it is a poorer locality, but I do keep a little of it in bottle. I do not draft it.

9834. We heard that in Glasgow there is a good deal of pure grain whiskey or patent still whiskey sold in some districts. Is that your experience?—Yes, I see in some localities a notice "Pure Cambus sold here—ten years old." I know one gentleman who has sold pure Cambus for the last twenty years.

9835. One of the witnesses told us he had traced a kind of connection between the occupations of the people and the whiskey they preferred, and he said that the shoemakers and tailors preferred the grain whiskey, which was a light one?—That is not my experience of my own business, but on the Queensferry side, and some portions outside Edinburgh, I have found, on visiting those localities, that they do consume the grain whiskey.

9836. The miners like that?—I am not referring to the miners more especially than to a great number of other people residing in the locality.

9837. But still a very large amount of pure grain whiskey is drunk in Scotland?—There may be. I cannot say I am conversant with that. I went into a place the other day to see what the 10-year old Cambus was like. I think myself it is a nice pure light whiskey which you do not have very much trouble in drinking, and you do not feel any bad effects from it.

9838. You say at present your customers are getting extra value owing to the former boom, and that you have still large quantities of old whiskies?—Yes.

9839. At the time in 1895 and 1896 when the stock was being developed, would the customer get a much newer whiskey?—Yes, I believe he would. Blends would be improved to the extent of two or three years just now as compared with that time.

9840. The advantage that the consumer is getting at present is accidental?—Yes.

9841. And I suppose you hope it will cease soon?—I have no desire that they should get anything worse put before them, but at the same time the profits are not so good just now.

The witness withdrew.

Mr. Daniel McEwen, called.

Mr. D. McEwen.

9842. (*Dr. G. S. Buchanan.*) Are you the senior partner of the firm of D. and J. McEwen, licensed grocers and wine merchants of Stirling?—I am.

9843. You have seven branches in Stirlingshire, Perthshire, and Inverness-shire?—Yes.

9844. Your firm is of long standing?—Yes, 104 years now.

9845. And you personally have been engaged in the sale and blending of whiskey for the last 50 years?—Yes, fully that.

9846. The trade that your firm does is chiefly what is termed a family trade, is it not?—A high-class family trade.

9847. Can you tell us about your sales and the kind of whiskey which forms the majority of your sales?—Highland malts and Lowland malts to a very great extent.

9848. The majority of your sales have been in Highland and Lowland malts?—Yes, blended together.

9849. (*Chairman.*) Blended—not self?—No, my lord.

9850. (*Dr. G. S. Buchanan.*) Then, besides blending Highland and Lowland malts you have other kinds of whiskey in which you have used a considerable quantity of grain?—We use a quantity of grain for our cheaper blends.

9851. During all your experience you can say that both kinds of blends are being bought and sold as whiskey?—Both.

9852. You never imagined until the events of a few years ago that the term "whiskey" should be restricted to pot still whiskey?—No. We always considered both kinds as whiskey—both malt and patent still.

9853. You considered that one was as much entitled to be called whiskey as the other, just as there is cane sugar and beet sugar?—Yes.

9854. Those are different in their source of manufacture, but are both named sugars?—Yes, the same applies to the two kinds of whiskey, malt and grain.

9855. The purchaser of sugar may want to know and may expect to know whether he is getting cane sugar or whether he is getting beet sugar?—That is a fact, because besides being whiskey merchants we are extensive grocers, and we are frequently asked for cane sugar as against beet sugar, and in the same way we are asked for malt whiskey as against grain whiskey.

9856. And if you are asked for it with that qualification you think you should give it?—Yes, certainly.

9857. You wish to say that to recommend that malt whiskey should not be allowed to be blended with grain whiskey would completely revolutionise the trade, and you urge a variety of objections which have already been made to us by many other witnesses?—I think it would completely ruin the whiskey trade.

9858. Could you tell us something about the change in the taste of the public as to the sale and consumption of whiskey?—There is a growing tendency to drink now a blend of malt and grain. There can be no doubt of that. At the present time our sales continue yet to be to a great extent, a great deal, at any rate, of pure malt, but our sale of blended whiskey is increasing.

9859. The blends which you sell containing grain whiskey are blends in which malt whiskey still preponderates?—To a very great extent.

9860. For the kind of trade that you ordinarily conduct, the high-class whiskey trade, the difference that you have made is to add a certain amount of grain, but not to make grain the preponderating partner in the combination?—That is so. I may say that 20 per cent. of grain and 80 per cent. of malt forms the principal blend that we sell.

9861. Can you tell me, as a practical point, whether the blueing of the malt whiskey by itself makes a difference to the sale?—I believe that very much depends on the water that is used. If the water contains a quantity of lime in it it has a tendency to make the whiskey blue when it is reduced.

9862. Have you had any experience of people objecting to malt whiskey simply on the ground that it is discoloured?—No, we never have.

9863. Your best blends are blended in bond, are they not?—Yes, all in bond.

9864. To your order, or have you bonded warehouses of your own?—We have no bonded warehouses in Stirling, but we send all our whiskies into Glasgow and get them blended there from the different distilleries.

9865. (*Chairman.*) In bond or outside?—In bond, my lord.

9866. (*Dr. G. S. Buchanan.*) The cheap blends for which you have not such a large sale you blend in your own cellars?—We do.

9867. When you blend in your own cellars do you keep for your own information any record or book which shows what the constituents are?—No, we do not in these cheaper blends. Our sale of these cheaper blends is so limited that it is not worth our while.

9868. There would be no difficulty about it if you wished to do it?—None whatever.

9869. You keep some of the proprietary advertised blends?—We do in bottles, but we do not push the sale of them at all.

9870. You think your own blend is better?—We think our own blend is better, and better value.

9871. The average of your blends varies from four to twelve years?—That is so.

Mr. D. McEwen.

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9872. Does that mean that no whiskey at the present time is being sold with a younger average age than four years?—No, we very seldom clear any from bond under four years old, either malt or grain.

9873. In the case of the blend which averages four years, can you say anything about the youngest constituent—what is its age?—About three or four years. We very seldom take any whiskey out of bond under three or four years old.

9874. You are not using any new whiskey at the present time?—No, we never clear any new whiskey from bond.

9875. You say in your *précis* that you still have a considerable demand for pure pot still whiskey eight to ten years old?—We have one particular blend that we make a speciality of, and it is ten years' old malt—old malt. We sell a very considerable quantity of that.

9876. Some of your customers will drink nothing else?—That is so.

9877. Do they know it is all malt?—Yes, they do. We make it known.

9878. Is it stated on the label?—It is not stated on the label, but it is stated in our whiskey and wine list that we guarantee it to be pure malt.

9879. On the other hand, to meet the growing taste, you say you have been forced recently to use a proportion of five to ten years' old grain in one or two of your highest priced blends, and there is a growing tendency on the part of the public for such blends?—There is.

9880. Your sales have increased since you introduced that?—They have materially increased for that special blend.

9881. Also there are some of your customers who have old grain merely?—We have a number of customers who will drink nothing else but pure old grain, Cambus, or Cameron Bridge, or Carse Bridge, but these are limited.

9882. You tell us that you are selling less brandy at the same time that you are increasing your whiskey trade?—Yes, our brandy trade is decreasing, and the whiskey trade is increasing.

9883. You think that is to some extent due to whiskey being recommended medically?—Yes, and owing to the fact that the whiskey is sold much older than it used to be.

9884. (*Dr. Adeney.*) Do you mean by that that it is a better quality?—Better quality. The age has improved it.

9885. (*Dr. G. S. Buchanan.*) You are of opinion that whiskey ought not to be labelled as Scotch whiskey in the case of a blend unless it is made up of malt and grain whiskey, both manufactured in Scotland?—Yes.

9886. You would apply the same remark to Irish whiskey?—Yes.

9887. And you object to whiskey made from molasses being described as whiskey at all?—We do.

9888. With regard to labelling, which is a matter we have been having evidence about, I understand that you would approve of all self whiskies being labelled as malt or grain, as the case may be?—We do. We sell a good many self whiskies from particular distilleries, and we label them with the particular distillery at which they are manufactured.

9889. (*Dr. Adeney.*) Do you sell Irish whiskey similarly?—Very little. We sell it in bottles, and it is labelled Irish; but we do not sell very much, I think.

9890. Do you add the name of the distillery?—We have John Jameson—that is all.

9891. Is that on the label?—Yes. We sell very very little Irish in our district.

9892. (*Dr. G. S. Buchanan.*) You would approve of putting on a label, in the case of self whiskey, "malt whiskey," or "grain whiskey," and in the case of blends of malt and grain the fact that it is a blend of malt and grain?—Yes, that it is a blend of malt and grain.

9893. Then there is the further difficulty that we have been considering, as to how to distinguish the fact that the malt whiskey preponderates in the blend?—I made a suggestion that where the grain whiskey preponderates it should be marked "Grain and malt," and, on the other hand, when malt preponderates that you should call it "Malt and grain." It might be a little protection to the public, but not very much, I am afraid.

9894. (*Dr. Adeney.*) Do you think a rough classification, such as you suggest now, would be advisable for the benefit of the consumer?—I think it would have a little effect, once the public came to know it.

9895. Do you think it would be advisable on behalf of the trade?—Yes, I do think so.

9896. Do you think it would be a protection?—It would be a protection, to a certain extent.

9897. (*Dr. G. S. Buchanan.*) You are familiar with the necessity of grocers having to label coffee mixed with chicory as a mixture of coffee and chicory?—Yes.

9898. They do not give the percentage of each, but they sell it as a mixture?—Yes.

9899. Are you aware of the difficulty that has arisen—in some parts of England, at any rate—it may not have done in Scotland—where the chicory amounts to 70 or 80 per cent., and the coffee is reduced correspondingly?—I believe that is so, and I suppose the same thing applies to whiskey.

9900. The circumstance that they are able to sell as a mixture of coffee and chicory a mixture which is pretty nearly all chicory has caused very considerable dissatisfaction?—I see there is that difficulty.

9901. And the same proposal has been advocated by traders and by public authorities that a line should be drawn at which the description should be "Coffee and chicory," or "Chicory and coffee"?—Yes.

9902. You would probably object to indicate on your labels the proportions of malt and grain whiskey in your blends?—Yes; I think it would be unfair to the blenders, and particularly the large blenders, who have formed such a huge trade, to ask them to do so and show the secrets of their trade.

9903. Supposing that a line was drawn in the matter of description in the way you suggest, it would be necessary to have some means of control over the labelling that we do not possess at present, and that some public authority should have some means of controlling the labels?—Yes; but I do not see how it could be done.

9904. You do not wish to make any suggestion?—No.

9905. Assuming that there was the obligation to put on the label whether you were giving a blend of malt or grain, and whether you were giving grain whiskey, would you have any objection, as a trader, to a check being applied by some properly appointed officer of the Excise, or local authority?—None whatever; as a firm, we would have no objection.

9906. Even if it went to the extent of from time to time checking the invoices?—None whatever.

9907. Would you approve of an age limit of two years in bond at least?—Yes.

9908. But you think this should be applied to all spirits?—To all spirits.

9909. Including gin?—Including gin.

9910. Do you think that that is really material and necessary to apply the two years' limit to gin?—I have no experience in gin, so I really cannot speak particularly about it, but for all other spirits I think the public would get a better article if the spirits were kept in bond for at least two years.

9911. You were going to show us an old purchase book in which are entered the whiskies purchased as far back as 1851?—If the Commission wish to see it I have brought it with me.

9912. The point you wish to make is that various grain whiskies are there invoiced as whiskey. "Kilbagie" grain whiskey and Cambus grain are both called "whiskey"?—Yes, they are both whiskey, and are entered in our bonding book as whiskey at that date.

9913 And also frequently "aqua"?—Yes.

9914. Which may apply also to malt?—Yes.

9915. (*Dr. Horace T. Brown.*) You told us that a Scotch whiskey must be a whiskey distilled in Scotland?—Yes.

9916. Then you would not admit that a mixture of Scotch malt whiskey and an English grain spirit could be legitimately called "Scotch whiskey"?—

No, it would be a hybrid whiskey; it would not be a Scotch whiskey.

9917. Would you have any objection to it being called a blended Scotch whiskey?—Yes, you could certainly call it a blended whiskey, but not a blended Scotch whiskey.

9918. What would you propose to call it?—A blended whiskey. If you put an English whiskey and a Scotch whiskey together I should certainly call it blended whiskey.

9919. Supposing it was a whiskey with the Scotch characteristics?—But still, if it was partly of English manufacture I do not think it is entitled to be called a Scotch whiskey.

9920-1. How would you differentiate two blended whiskies of that kind? Supposing one is Scotch and the other Irish?—You could not call them either Scotch or Irish. You would call it a blended whiskey. A blended malt whiskey you could call it, or a blended grain whiskey, but not a blended Scotch whiskey, nor yet a blended Irish whiskey.

9922. Blended whiskey with Irish or Scotch characteristics?—You could put anything you like on the label.

9923. (*Dr. G. S. Buchanan.*) A blend of Scotch malt and English grain?—You would require to designate it on the label.

9924. (*Dr. Adeney.*) If the produce of the two countries were blended together you would require it simply to be called a blended whiskey, or some adjective description?—You would require to add something at the end of your label to tell the public it is a blend of Scotch or English, or a blend of Scotch and Irish, beside the words "blended whiskey."

9925. (*Dr. Horace T. Brown.*) Your arguments for an age limit are based, I suppose, simply on the fact that the public will get a better article?—Yes, and from my own practical experience that whiskey improves so much by being kept in bond for a few years.

9926. Is not that an argument that might be applied to many other things—wines, beer, ciders, and so on?—One knows an old wine is very much better than a young one.

9927. But you would not consider that the wine merchant should not be allowed to sell his produce at any age he thinks fit?—My principal reason is, I think the public would get a much better article, and it would be much better for them.

9928. That principle applies to a good many other things?—It may.

9929. Would you carry your principle to its logical conclusion?—It depends on the article.

9930. (*Dr. Cushny.*) I suppose most of your customers order whiskey by some special brand, do not they?—They ask for some of our special blends—either our special or our registered blend, which we have called "Sterlini," that is a pure malt, and they ask for that, or they ask for our "special," and others again ask for a self whiskey.

9931. How much information do you give your customers about those blends? Supposing a man takes your list and sees a special brand or an extra special blend, what does he know about it?—He does not ask; he judges by his own taste and the respectability of the merchant. He has confidence in the merchant, and he knows you are giving him a good article. It is the whiskey he likes, and he continues to take it.

9932. He never knows how much grain there is, for example, and how much malt?—No. If a customer asks me "How much grain is there in this whiskey" I would tell him exactly what there was. We do not hesitate to tell them that.

9933. (*Dr. Bradford.*) But he does not ask as a matter of fact?—No, he does not ask.

9934. (*Dr. G. S. Buchanan.*) I understand that you distinguish between grain and malt and blends in your catalogues and lists?—We have it marked distinctly "This is a pure malt whiskey," but with regard to others we do not say what those contain.

The witness withdrew.

Mr. H. C. Craig, called.

9935. (*Chairman.*) You are a director of Dunville and Co., Limited, of Belfast?—Yes.

9936. Are there two limited companies now?—The distillery was obliged to be made into a limited company on account of the Excise regulations. The law will not allow you to be a dealer and have a distillery within two miles, so we had to get round that.

9937. One company is called Dunville and Co., Limited?—Yes.

9938. Which business does that carry on?—They are wine and spirit merchants and blenders—the original company.

9939. Where do you carry on that business?—In Belfast.

9940. Then there is another company called William Dunville and Co., Limited?—Yes.

9941. How is that distinguished from the first company?—It is an evasion of the law.

9942. I do not want to go into any question of evading the law, but there is a second company carrying on the business of distillers?—Yes.

9943. What are they called?—William Dunville and Co., Limited.

9944. Dunville and Co. are dealers, and William Dunville and Co. are distillers?—They are the same company.

9945. One is called Dunville and Co., and the other is called William Dunville and Co.?—That is so.

9946. When did this process that you have described as an evasion of the law take place? When did you commence your distilling business?—In 1869.

9947. You were dealers up to that time?—From 100 years ago.

9948. 1808?—Yes.

9949. And then in 1869 you became distillers?—We added a distillery to the business.

9950. In your distillery what is your process—patent still or pot still?—We make both patent still and pot still.

9951. Have you always done that?—Always.

9952. Since 1869?—Yes.

9953. In what proportions?—I would rather not answer that question.

9954. A general statement will suffice. Do you make more pot still or more patent still?—Ever so much more patent still. The patent still is largely in excess.

9955. Do you also blend?—Yes.

9956. I suppose you only blend your Irish whiskey—your patent still and pot still?—Our Irish whiskey—only our own. We are the only blenders, we believe, who sell their own produce from their own distillery.

9957. You do not blend Scotch at all?—Oh, yes.

9958. Where do you get your Scotch from?—We get the Scotch malt from Scotland, and up to the time of the Islington case we used our own patent still spirit.

9959. By malt you mean malt whiskey?—Yes.

9960. Did you get patent still whiskey or grain whiskey from Scotland?—No. Up to the Islington case we used our own patent still whiskey, but since then we have bought the patent still whiskey from Scotland.

9961. Have you any objection to telling us, has this blend with Scotch whiskey now become an important part of your trade, and is it now considerable?—No, it does not form a very large portion of our trade at all—in fact, it is a sort of adjunct to it.

9962. What has caused you to blend Scotch whiskey? Is it the taste and demand?—Yes. Customers with

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every confidence in us as knowing about whiskies have asked us to supply them with a Scotch whiskey.

9963. Why do you not adhere to your Irish whiskey? Why do you want to go to Scotland?—We are business men, and we want to make as much money as we can.

9964. Is it that you can make more profit by blending in this way with Scotch whiskey?—I do not follow your lordship.

9965. I want to know why you do not adhere to your Irish whiskey, and why you go to Scotland?—We do adhere to it. We sell as much Irish as ever we can.

9966. Is it because there is simply a demand for it, and you meet your customers' demand, or is it because you can blend more cheaply?—No, we are in business and we sell wines as well.

9967. But keep to the whiskey for the moment. I want to know why you blend with Scotch. You say you are business men and wish to do your business as well as you can. Do you blend with Scotch whiskey because your customers ask for that, or because it is more profitable to you to blend it in the shape of getting a cheaper commodity?—I cannot quite follow the question.

9968. You say you blend with Scotch whiskey?—Do you mean the Scotch whiskey that we sell?

9969. The Scotch whiskey that you get to blend?—Yes.

9970. You have to send to Scotland for it, or Scotland sends it to you. Why do you go to Scotland for it instead of keeping to your Irish whiskey? You say it is because you are business men?—I follow you now. This last three years I have made pot still Scotch whiskey, but there is none on the market yet. We had to get the malt whiskey from Scotland because it is higher in the flavours, it is peaty, and although there is some made in Ireland there is not sufficient.

9971. When you say you make Scotch whiskey, what do you mean by that?—After the Islington case—the decision was so absurd—we had a quantity of malt left, and we made all malt whiskey; we also dried some with peat, and it made just as good Scotch whiskey as that made in Scotland.

9972. I understand you make it in Ireland?—Yes.

9973. Then why do you call it Scotch whiskey?—I have not called any of that Scotch whiskey yet, because it is only just made.

9974. (*Dr. G. S. Buchanan.*) It is a Scotch type of whiskey?—It is a Scotch type of whiskey.

9975. (*Dr. Adeney.*) You have not put any on the market?—No.

9976. (*Dr. G. S. Buchanan.*) A type of Scotch malt pot still whiskey?—Yes, exactly the same.

9977. (*Chairman.*) I want to get from you what I have not yet got. You have changed your mode of procedure by blending with what you call Scotch whiskey?—No, we have not changed the procedure, it is still our Irish manufacture. We have added to our business and supplied those customers who have asked us to supply them with Scotch whiskey.

9978. Why have you changed it so as to supply them with Scotch whiskey? Is it because your customers have asked you for it, or because you can produce it more cheaply, and get a greater profit?—Customers have asked for Scotch whiskey.

9979. Is it better for you, as a matter of business in relation to profit, so to supply it, or could you make as much if you supplied only Irish whiskey?—It is an addition.

9980. You will not bring your mind to the question. I am asking you as to the cost of production, which is the cheaper to produce—what you have now called your Scotch whiskey or your old original Irish whiskey. Which is the cheaper as regards materials?—They are both very much the same, except in the one case, where we distilled the pot, we have now to pay the Scotch distillers' profit.

9981. What is the result? Which costs you more to produce, this which is pure Irish whiskey, or this which is partly Scotch whiskey?—It is very much the same cost.

9982. Then I presume your motive in producing it, if there is a difference in profit, must be because there is a demand for it, and your customers have asked for it?—The customers have asked for it.

9983. Is there a demand for it?—Yes.

9984. Has this blending of Scotch and Irish whiskey been increasing?—No. The Scotch, so far as we are concerned, is only a very small drop in the ocean.

9985. Are you selling now Irish whiskey in a considerable quantity, blended?—Yes, all blended unless the other is specifically asked for.

9986. Is your business principally in Ireland, or do you export to England?—It is all over the world.

9987. Foreign trade?—Yes, and enormously in London.

9988. And English consumption?—Yes.

9989. Do you export to Scotland at all?—Oh, yes.

9990. Do you know whether they are using your Irish whiskey for blending in Scotland?—No, my lord. Long ago our trade with Scotland was much greater than it is at present, but that was in the days when they tried to make them take the Scotch pot or the self pot whiskey in Scotland, but as soon as they reduced it and made it thinner it then competed with the Irish whiskey, and now there is a great deal of patent still alone sent to Scotland.

9991. The patent still production in Scotland is a substitute for your Irish whiskey of olden times?—Yes.

9992. When your Irish whiskey went to Scotland, in the olden times, was it designated as self or individual whiskey, or was it an old blend?—It was an old blend. That is, since the patent still.

9993. (*Dr. G. S. Buchanan.*) It was patent still whiskey which you made that went to Scotland for blending?—We are not distillers, in the ordinary sense, selling to the trade. We had a very considerable trade as blenders. We then added the distillery, and then made all our own whiskey afterwards. The whiskey that we sent was in bulk as a blend.

9994. (*Chairman.*) I want your assistance from the Irish point of view. What is your idea of the meaning of the word "whiskey"? First of all, its derivation, and next its ordinary application?—I agree very much with the explanation that Mr. Keith gave yesterday as far as details are concerned. I rather fancy the actual word "whiskey" is English, rather than Irish or Scotch.

9995. Your attention has been called to Mr. Keith's evidence, and perhaps it may save time if I asked whether you, on the whole, agree with the account he gave of the origin of the word?—Yes, my lord; his evidence practically agrees with the researches I made myself.

9996. (*Dr. Adeney.*) Did he not say it was derived from a Celtic word?—I am not sufficient of a scholar to know the difference between Celtic and Gaelic.

9997. Mr. Keith suggested it was derived from the Celtic, but you say it is English?—The word is English, but the difficulty of pronouncing the word "usquebaugh" has twisted it round, because "usquebaugh" clearly was not whiskey.

9998. (*Chairman.*) With regard to Ireland, you refer to a statute of 1735, which would be the 9 of George II., cap. 8?—Yes.

9999. That is an Act which was passed to prevent the evil arising by the retailers of "beer, ale, brandy, rum, Geneva, aqua vitæ, and other spirituous liquors" giving credit to day labourers?—That is so.

10000. You treat the aqua vitæ as being whiskey?—I want to argue this way, that if the word "whiskey" had been in common use in those days it would have been put in in such an Act.

10001. The word "whiskey" was not in common use, but whiskey was in common use, so they had to deal with it by statute. In your opinion, did aqua vitæ refer to whiskey, or not?—Yes.

10002. Then you refer to the Scotch Act of 1736, and I think that was mentioned by Mr. Keith?—Yes.

10003. "Aqua vitæ" occurs there?—Yes.

10004. Your deduction from that is that if the word "whiskey" was in common use it would have been employed in the statute?—It might reasonably have been put in in those days.

10005. I must go to your poetical knowledge now. I believe the first time you can find the word "whiskey" is in a poem of Burns, in September, 1785?—That is so.

10006. Can you give us generally how the word comes in?—That is a poem, to some person called Lapraik; I think he must have been his landlord, and the words "whiskey" and "usquebae" are both used.

10007. It is rather unusual for a man to address a poem to his landlord?—He made two or three of them.

10008. We had better see that?—When I say he was his landlord I believe he was. Here is a copy of the poem and there is the word "whiskie." (*Producing book of poems.*)

10009. This is an edition of Burns without a date, but there is a poem here of September 13th, 1785, addressed to J. Lapraik?—Yes.

10010. Will you read it?—

"But browster wives an' whiskie stills,
They are the muses,
Your friendship, sir, I winna quat it,
An' if ye mak objections at it,
Then han in nieve some day we'll knot it
An' witness take,
An' when wi' Usquebae we've wat it,
It winna break."

10011. That is in 1785. As far as you know, was that the first use of the word "whiskey"?—It is the first that I have been able to find, but the word would probably be in common use before that date.

10012. We have got before that, "aqua vitæ" and "usquebaugh," but the word "whiskey" was first used in 1785 as far as you know?—As far as I know.

10013. About the same time there is an Inland Revenue report from 1786 to 1798 where a licence fee of £2 is imposed, and from 1799 to 1805 there is a higher licence fee imposed of £6. The phrase used there, I believe, is "whiskey factors"?—Yes, there is a licence here for whiskey factors from 1799 to 1805.

10014. A £6 licence?—It was raised from £2 to £6 in 1799.

10015. But in both those periods when it was £2 and when it is £6 the words "whiskey factors" are the words used?—Yes.

10016. That is very much at the same time that Burns was using it?—Yes.

10017. That word "whiskey" seems to have dropped out in the Excise duty after a time?—Entirely. It is the only occasion, as far as I know, when they have used it officially.

10018. You would not know any reason why it dropped out, you only know the fact that you could not find it?—That is all.

10019. Did you know of the use of the word "spirits" as distinguished from whiskey"?—Yes, my lord, when I was a child in the country they did not use the word "whiskey," but they used the word "spirits."

10020. In Ireland?—Yes, or any part of the world.

10021. I suppose the fact was that locally there was scarcely any spirit drunk but whiskey?—That is so.

10022. You would not have much brandy drunk in the north of Ireland?—No, not very much.

10023. Nor gin?—No, I should say gin very seldom, if at all.

10024. When the general term is used it would convey to the ordinary person that it was a spirit that they would get, and that that would be whiskey?—Yes.

10025. And therefore you would have the word generally applied?—In this old report of the previous Commission of 1799 the words are used synonymously. One Commissioner seems to use the word "whiskey" and another to use the word "spirits."

10026. What is that report?—This very old report that Dr. Brown has referred to where the words are used as synonymous by two of the Commissioners.

10027. Would you give the reference to that report?—It is page 506 of the old Committee's report of 1799. Perhaps I might ask Dr. Brown to read the passage?

10028. (*Dr. Horace T. Brown.*) This is the passage you refer to: "It is, however, upon these inaccurate statements and calculations of Mr. Taylor that Dr. Jeffray builds his supposition of the quantity of spirits made in 1786 without any other ground whatever of similarity between the year 1786 and the year 1794. He says: 'The question is not who drinks whiskey, or who does not, but how many gallons of whiskey are made.' But it is well known that some distillers with the same sized utensils have made twice as much spirits in one year as they did in another." The words "whiskey" and "spirits" are apparently used to express the same thing. That refers to 1786.

10029. (*Chairman.*) I will see if I can get from you what you say is a fair definition or explanation to give to the word "whiskey"?—Whiskey is an alcoholic drink made palatable by direct distillation from almost anything and anyhow. That is the definition of what it is up to the present.

10030. From anything or anyhow?—Almost anything or anyhow.

10031. Supposing you could distil apple juice or currant juice, would you have no limit as to the ingredient?—You did not ask me if I had any limit, but you asked me what whiskey was.

10032. I asked you what you thought was a fair definition of the word "whiskey"?—That is a fair definition of "whiskey" up to the present.

10033. You said, "made of anything and anyhow." We have not had that up to the present?—Oh, yes, you have had it made out of most wonderful things.

10034. What do you mean by "anything or anyhow"?—The evidence of the old Acts and the Revenue reports, which go to show it was made out of almost anything that contained starch that could be converted.

10035. Must there be any malt in it?—I think plenty of whiskey has been made without malt.

10036. Or grain?—Yes, without grain.

10037. Without any malt or any grain?—Yes, it has been made out of potatoes and turnips and treacle.

10038. Supposing you have a well-distilled decoction of turnip juice, you would call that whiskey?—It has not been made lately so far as I know.

10039. Of course it has not, but I wanted to know what your definition was, and what you thought would be a fair composition to be called whiskey. You would not have anything that could be made, would you?—No, if something has to be done, then one of the cereal definitions is quite enough.

10040. But I want to know the ingredients. You have not touched on the ingredients except by the words "anything and anyhow"?—That is what it has been in the past.

10041. What do you think now?—Any of the cereal definitions would be a perfectly fair thing at present.

10042. Then you do think that cereals ought to be employed?—You asked me first what whiskey is.

10043. No, I did not, indeed. I asked you what you thought was a fair definition of whiskey. There may be surreptitious makes, and I am not dealing with those. The Commission want to know what ought to be the condition of things. What, in your opinion is a fair definition of the word "whiskey"?—At the very end of my *précis* I say, "A cereal definition such as Mr. Walter's would raise no objection from anyone."

10044. Had we better not strike out the words "made of anything or anyhow." You do not mean that, surely?—As an individual, I do not see why it should not be made in that way, but as a trader, I do not mind the cereal definition. As an individual I do not see why you should stop progress.

10045. But definitions must be based on things that exist. What do you suggest, other than cereals and malt, you can make whiskey out of?—You can make alcohol from anything containing starch or sugar.

10046. But I am talking of whiskey?—But whiskey is largely alcohol.

10047. This is a whiskey Commission, and will you give us your attention to what we are inquiring about? Do you think the introduction of malt and cereals is a necessary factor in the making of whiskey?—As at present made, yes.

10048. We are dealing with whiskey as it is. Would you call a thing whiskey where there was no malt and no cereals?—Yes, my lord. There has not been any question of it made in the past.

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10049. Of what?—Of whiskey made without malt and without cereals too. Any grain was prohibited by statute to be used for making spirits.

10050. When and where has this whiskey been made without malt and without cereals, and pray tell us what it was made of, if you will?—It was prohibited to make any aqua vitæ or spirits at all for two years from grain. I hold that the distillers had to supply the demand, and they made it out of treacle and turnips, and all sorts of things.

10051. To your knowledge is anything of that kind going on now?—Oh, no, but history repeats itself.

10052. What do you think now is the proper definition of the word "whiskey"?—A cereal definition such as Mr. Walter's is quite sufficient.

10053. He does include cereals?—Yes.

10054. And malt?—Yes.

10055. Do you think that is right?—Yes.

10056. I do not want to cross-examine you, but that gets rid of your words "anything and anyhow." If Mr. Walter is right he would not include "anything and anyhow"?—No, Mr. Walter was confined to a specific point in the police court, which he had to disprove.

10057. It is thought by some of my colleagues that you are drawing a distinction between what whiskey was in the past and what whiskey is now. I ask you distinctly what you now think should be the definition?—I distinctly think now that the cereal definition would meet the whole case if anything has to be done.

10058. That is what Mr. Walter dealt with?—Yes. There have been several of them.

10059. Do you think that in order that a compound should be called whiskey it should be made of cereals and malt, or cereals only?—Cereals only.

10060. And no malt?—Malt is a cereal.

10061. At any rate, that is required; but if you were told "This is made of turnip juice, or potato juice," would you think that ought to be called whiskey?—I have never seen it, unless any of the German spirit I have seen has been made from it.

10062. Should it be called whiskey?—Yes. So far as the German spirit that I have seen is concerned, I could not tell the difference.

10063. Would any trader think that that spirit made from potatoes or turnips should be called whiskey?—Personally, if you ask me, I cannot see the difference. The personal position is so much mixed up with trading, that it is difficult to discriminate.

10064. (*Dr. Horace T. Brown.*) You cannot tell the difference between foreign silent spirit and patent still grain spirit?—No.

10065. (*Dr. Adeney.*) No difference in flavour?—If you put three samples before me, one of them made in Ireland, and one made in Scotland, and one made in Germany, they would all be different.

10066. In what?—In flavours.

10067. Is not that the predominant point about the whole thing that enables you to distinguish those three spirits?—The difference is so easy.

10068. But what is the difference due to? If you had had Hollands and Geneva, what is the difference due to?—The Hollands and the Geneva are different owing to the materials added.

10069. Is not it all a question of flavour?—Entirely, but you cannot standardise the flavour.

10070. The flavour is sufficiently strong to distinguish beyond doubt?—Personally, I would not like to lift one and say what it was.

10071. After tasting it?—No. You can tell that there is a great difference.

10072. You do not claim to be an expert, but some of the witnesses have claimed that they can tell?—To lift one and tell whether it was German, Scotch, or Irish?

10073. Yes?—I could not, personally.

10074. Are you confining your replies now to patent still spirit, or to all spirits?—In answering your question I am referring entirely to patent still spirit, but it follows with pot still as well.

10075. (*Chairman.*) Do you think that any person, therefore, is entitled to call it anything he likes, and say "I call this whiskey, and therefore I will sell it as whiskey"?—Up to the present that has been the case, my lord, if it is the product of direct distillation.

10076. A person may call anything whiskey if he likes, and, I suppose, call anything he likes cider, or give any name to it that he thinks right?—Anything that has been distilled.

10077. Anything that goes through a still may be called whiskey?—Up to the present.

10078. (*Dr. Adeney.*) Could brandy be called whiskey?—I do not know whether the law allows us to bring grapes into a distillery. I could not answer that without looking it up. Anything that goes into a distillery is defined.

10079. (*Chairman.*) We have got now from you that anything that goes through a still that a person chooses to give the name of whiskey to you would allow him to do it?—I say that that is what has been done up to the present.

10080. Surely up to the present what people have been drinking as whiskey has had some malt in it and some grain?—Yes. None of these things, so far as I can possibly find out, have been done in the last forty years. The Inland Revenue authorities would be able to settle these points.

10081. But I want your definition. Although they have not done it, according to you if they did it it would be all right?—Yes, certainly.

10082. I have a great respect for a free trader, but you have gone beyond anything that I should have expected?—I am only quoting facts from history and the old Acts.

10083. I am not asking you about the old Acts, but I am asking you what you think should be the definition of the word "whiskey" now?—A cereal definition.

10084. You have been telling us that if it went through a still and was made from potatoes or turnips it should be whiskey, and now you say it should be from cereals?—I say up to the present moment if I make it out of potatoes or turnips it is still whiskey—if I choose to do so.

10085. If you say it is so up to the present, do you wish any alteration made?—It is not made out of any of those things now, and if the cereal definition is made it would do no harm; but we do not know that it may not be taken away again, the same as it was long ago. It was prohibited altogether long ago.

10086. There have been some writings as to what is required to be whiskey. You have the report of a Revenue officer, Samuel Morewood, have you not, in the year 1823?—Yes, my lord. On page 8 of his preface he says one-fourth of malt must be used, "as required by law."

10087. What is that document? Is it an official report?—No. This man Samuel Morewood was an Excise officer, and, in fact, all the books on the subject are written by Excise officials.

10088. Just read what he says?—He says: "The cost of manufacture therefore in January, 1824, may be fairly estimated at the following proportion, namely, one-fourth of malt as required by law."

10089. Can you trace that out and tell us what that means?—The inference is that the law said that they must use not less than one-fourth.

10090. If it is the law it must be by statute, but you have not been able to find the statute?—I have a statute of 1823: George IV. cap. 94, section 91.

10091. This is the section: "Every distiller shall from time to time, within three days after the end of every distilling period, deliver to the proper officer all the mashing permits which shall have been granted for malt used in making the wort or wash distilled in the distillery of such distiller during such period; and if the quantity of malt so used, as appearing by such permits, shall be less than after the rate of one bushel of malt for every ten gallons of proof spirits in respect of which such distiller became chargeable during such period, then and in such case every such distiller shall, for and in respect of every bushel of malt so appearing to be deficient, forfeit the sum of 5s.: Provided always, that in case any such distiller shall, within six days after the expiration of such

period, pay to the proper collector of Excise a sum after the rate of two shillings and sixpence for every bushel of malt so deficient, then such distiller shall not be proceeded against for such penalty, and such sum so paid shall be placed by such collector to the account of the duties payable on malt." That qualifies it. It seems to me in one sense it forbids it being done, and yet a man could get out of the penalty by paying 2s. 6d. Then Section 93 says that if the distiller should use malt only he can claim an allowance?—That is a drawback.

10092. That is a kind of bounty for using malt only?—Yes, my lord.

10093. Then there is the Inland Revenue report of 1870?—Yes.

10094. Do you know anything of the practice that had grown up of smuggling whiskey that was made illegally? I do not know whether that is a matter which has come before you at all?—Except in searching through the old records. There seems to have been scarcely anything in Ireland but the smuggled whiskey. There were so many smugglers. In that report the Inland Revenue people themselves say of their own regulations, etc.: "They were, however, at the same time so stringent and so ill-contrived as to prevent the licensed distiller from producing spirits equal in quality to those of the smugglers."

10095. And more than half of the spirits consumed were supplied by the smugglers?—Yes.

10096. I suppose if that was the competition while the smuggling production was so great as that, there would be a very rough production, I suppose, compared to what it is now?—Yes, it cannot have been anything like what is produced at present or so carefully looked after by modern distillers.

10097. Probably that is shown by this which you have just pointed out, that there is a drawback or an allowance of 1s. when malt was used only, and probably that was to raise the standard of the spirit?—Oh, no. The fact that in Scotland an allowance or a drawback of so much a gallon was allowed on all malt spirit must necessarily have helped to stereotype the use of all malt in Scotland. That is the inference I wish to draw from that.

10098. Was that drawback allowed only for Scotland?—At that time. Afterwards the Union came, and of course this very Act you have read is after the Union.

10099. Of course it was?—But in Scotland, long before the Union with Ireland, they allowed a drawback of 1s. 2d. per gallon. Mr. Keith explained that yesterday.

10100. Was not the principle there the same, that they wanted to raise the quality of the whiskey by obtaining as much malt to be used as possible?—It is the other way about, is it not? They allowed them a drawback of 1s. 2d. a gallon.

10101. What do you say was the object of that allowance?—Oh, I beg your pardon. The fact that they got a drawback would make them use a malt. Your lordship is quite right, but it would be in the agricultural interest.

10102. Then on the next page of your *précis* you have got an article upon the popular taste for smuggled whiskey?—There was an almanack and directory published by Loftus for the Inland Revenue, and I came upon one of 1861 in which there is rather a long article.

10103. Is it "Loftus's Inland Revenue Almanack"?—Yes, of 1861, page 5.

10104. What is the general effect of it?—There is an argument for and against myself, but what I wanted to point to was this passage: "The legal distiller, on the other hand, looking chiefly to large produce and the amount of saleable spirit yielded by his materials, reckons every pound or ounce of unconverted extract that may be left in his wash as so much loss, and therefore urges fermentation to its utmost importance. Thus, although the smuggler as a rule gets less spirit than the regular distiller from the same quantity of malt, yet his produce is estimated to be so superior in quality and in flavour as to compensate him for the deficient bulk."

10105. Do you know who Loftus was?—I do not know who he was, but it is the name of the man who prepares all the books and almanacks for the Inland Revenue people.

10106. There is one other Act of 1760 that I want you to refer to?—That is an Act of George II. That is the one I had to search up in the House of Commons, and I could not get a copy of it. I have verified every extract.

10107. Is it 1760?—I have it as 1760.

10108. At any rate it is a statute in the reign of George II.?—Yes.

10109. That recites that all previous restrictions are repealed, and throws distillers open to wheat, barley "or any other kind of grain"?—That is so.

10110. Have you verified this?—I have, my lord.

10111. You have not got more exact words than those I have just read?—I did not copy out the whole thing because it was very lengthy, but I only wish to emphasise that it leaves it open to "or any other kind of grain." When the Corn Laws were repealed maize would naturally fall in, and was undoubtedly used, but as against that in the Inland Revenue Report they say that with the Revenue sanction in 1858 and 1859 experiments were made with rice. I do not understand that, because rice is a cereal.

10112. I want that a little more specifically given. That was a Report of the Inland Revenue which says that in 1858 and 1859 experiments were made with rice?—It says: "In 1858 and 1859 experiments were made with our sanction in the distillation from rice. This process has since been successfully, but not extensively, adopted. The alterations made in our distillery laws somewhat later than the period of which we are treating removed the legal obstacles to its general adoption."

10113. (*Dr. Horace T. Brown.*) That is a particular process apparently?—I could find nothing after this statute of George II., where it throws it open to any other kind of grain, that takes the privilege away, and I do not understand why they needed a special permission for the use of rice.

10114. It probably refers to the acid conversion of rice, and that permission was granted for the particular way of transforming the rice, rather than for the use of rice in the ordinary process?—It might have been that.

10115. (*Chairman.*) You have got, I think, a copy of the "Belfast Newsletter" of 1813?—Yes, my lord.

10116. Have you got an advertisement there of your own firm?—Yes, it was then called Napier and Dunville.

10117. But you are their successors?—Yes.

10118. What is the whiskey called there?—It is called "Old Corn Whiskey."

10119. What do you understand that to mean?—I do not exactly know how to describe it, but it simply shows that as far back as that there was not a thing that was just specifically called "whiskey." There were differences even as far back as that in advertisements and other things of that sort.

10120. What is the meaning to you of the word "corn" there?—In my early days, in the North of Ireland, oats were always called corn, but I fancy there it must mean all grain, although they did make whiskey from oats only in Ireland.

10121. Would it include any malt in it?—Oh, yes, some of the oats would be malted.

10122. You have got three advertisements in 1814 with the word "whiskey" only?—Yes.

10123. Do you draw any distinction between the corn whiskey and the "whiskey" only?—I only produce those advertisements to show that as far back as that a distinction of a sort was made, and it was not called just "whiskey."

10124. There must have been some distinction between the "corn whiskey" and "whiskey"? Then you go on to 1828, when you have an advertisement?—Yes; "220 puncheons of old malt and grain whiskey."

10125. I suppose that speaks for itself. That was a compound of malt and grain?—I merely instance these. I cannot draw any inference whether it would mean a proportion of the 220 puncheons were malt whiskey.

10126. But from your knowledge of the subject as an expert I should have thought you would have said

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that referred to the whole 220 puncheons being of one quality, and that the quality applied to all—it was all: "Old malt and grain"?—But against that I have the old private stock books of 1831, and there they call it quite distinctly: "Malt whiskey" as one series, and the other is grain whiskey.

10127. I thought they both called it grain and malt?—Yes, but they separate it. Here is the book. (*Producing book.*) There is grain and there is malt.

10128. This is the 31st December, 1831: "Whiskey grain and whiskey malt." Are they different duties or the same?—The same duty. Some of that is taken in duty paid, and some is taken in in bond.

10129. Your point is that there you have got whiskey grain, and there you have got whiskey malt?—Yes.

10130. That does look as if they were two distinct things?—In those days they were kept absolutely separate.

10131. What is your idea about the grain? Would it be without any malt, or mixed?—No, that is what is known as ordinary pot still whiskey.

10132. But that is 1831?—Yes.

10133. What was the manufacture of the grain when you got grain whiskey? What were the materials, do you think, in those days?—I can only say from old books it was made from all sorts of materials, but I presume it was barley.

10134. (*Dr. Horace T Brown.*) It would be converted by malt?—Yes.

10135. (*Dr. Adeney.*) A mixture of malt and unmalted grain?—Yes.

10136. (*Chairman.*) Have you any trace, in those days, of the whiskey being made of grain without malt at all?—No, my lord, except in the records of these old books.

10137. Will you summarise what you say is the result of what you have found in these books and in these advertisements as to the old manufacture of whiskey?—I cannot summarise it any further than at first they tried to get a palatable alcoholic drink by distillation from almost anything. It is quite definite in this little book by Scarisbrick.

10138. Of course, as we know in the old time that you are speaking of, the still that was used was the pot still?—Yes, there does not seem to have been any other still till somewhere about 1800.

10139. When, as far as you know, was the patent still first introduced into the Irish distilleries?—Mr. Virtue gave evidence to that effect, and I saw the correspondence. They must have got a still very shortly after it was advertised. I forget the exact date it was advertised.

10140. We know the patent still was in 1831?—But they got it within a year or two.

10141. Do you know when your predecessors used the patent still?—As far as I can make out, when we as blenders obtained the patent still whiskey it came under the category of grain. We cannot separate it in our books, and cannot find out when we first used it.

10142. Can you give me at all the time? Take it very generally, when do you think you first began to use the patent still?—I cannot give any date, but we have used it for a very long time.

10143. 50 or 60 years ago?—Yes.

10144. You have used both, have you not?—Yes.

10145. Do you make any difference in the materials you use in the pot still and in the patent still?—We have never used anything at all but grain converted with malt in both.

10146. Any difference in proportion?—Yes, there is a difference in proportion in malt and patent still.

10147. When you use the patent still and when you use the pot still is there a known difference of proportion in the ingredients used between the two processes?—I do not quite follow.

10148. You use the pot still, and you use the patent still?—Yes.

10149. You use malt in both and grain in both?—That is so.

10150. In either one of those, the pot still and the patent still, is there a difference in the proportion of malt and grain used?—Oh, yes; we have always used rather more malt in the pot still than in the patent still.

10151. Is that a more expensive ingredient?—Oh, yes.

10152. What comparison do you draw between the relative advantages of the two products? I first ask you in relation to your trade, and then in relation to the consumer?—The patent still undoubtedly produces a clearer and a thinner article, and it was cheaper, and it enabled them all to make more profit.

10153. We are dealing with the trader now?—Yes.

10154. At the same time, of course, I suppose your market must depend on your demand?—That is so.

10155. Did you find that to meet the demand you had to take pot and patent still and then blend, or did you sell a pure self whiskey?—Of course, all this happened long before my time, and I am only giving my reasoning. Whiskey was an unknown thing in England. I have heard my father say that when he came over to England somewhere in the fifties many English people did not know whether whiskey was a thing to be eaten or drunk. They did not know what it was. I admit it is not evidence, but they did not know. Railways had just come in then. The drink in England and in London, and all round here was gin. Gin was a thin alcoholic drink. The Irish whiskey as then made was a nearer approach to gin than the Scotch thick whiskey, and it went ahead rapidly. Fortunes were made by the sale of Irish whiskey in the early days.

10156. You are getting a little away from what I was upon. I wanted to know not what was about the past but what exists now. I understand you to say that the patent still whiskey can be produced at cheaper cost than the pot still whiskey?—Oh, yes.

10157. Do you sell the patent still whiskey pure as a self whiskey as well as blended?—If anybody wants it; but I would like to explain we are blenders, or owners of proprietary articles and certain blends which we sell. We do not tell them the age or proportion, or anything at all about this blend. We sell it all on sample, but if anybody wants pot still whiskey, or wants patent still whiskey, we sell it to them, if specifically asked for as such.

10158. Will you give me very broadly the proportion of your trade? Is your blended trade far greater than anything else?—Oh, yes. The other trade just enables us to say what I have said.

10159. That is that the bulk of your trade is now carried on by blends between pot still whiskey and patent still whiskey?—Yes.

10160. I presume from what you have told me that you know of nothing that is deleterious or injurious to the health of anyone in the patent still whiskey?—No. I have heard many people say so, but personally I have not known. I have tried the usual experiments that others have tried, but I cannot say that it is injurious.

10161. What do you say in your Irish whiskey is the effect upon flavour and upon bouquet of the patent still whiskey? The patent still whiskey, is it poor stuff, or what is it?—I have already said that I cannot follow some of the other witnesses who would discriminate between Scotch patent still and Irish patent still. I can produce you pot still that no one living could tell whether it was Scotch or Irish.

10162. I am not talking of Scotch or Irish, but the difference between these two whiskies. Take your Irish whiskey, pot still and patent still. How would you describe the patent still whiskey if taken as a self whiskey without blend as regards flavour?—It is much purer and thinner, and has comparatively little flavour.

10163. Would it be right to call it mawkish?—No, my lord.

10164. You do not quite agree with that?—No, I do not.

10165. According to you then the proper way to deal with patent still whiskey, if you wish to have it at its best, is to blend it?—Personally, I believe so.

10166. That is so, is it not—I understand so from your evidence?—If anyone likes it unblended they are welcome to have it.

10167. You told me you have very little market for the unblended whiskey?—We would sell as much of it as we possibly could, but our own particular firm is on very much the same lines as others. The sale of all pure patent still is hurting our blend just as much as it is the pot still.

10168. But you do not sell very much of the pure patent still whiskey?—No; but others do.

10169. That must mean there is no demand for it?—There is a very large demand, but we do not cater for it.

10170. You cater for it for the purpose of being blended, but not for being drunk?—For neither.

10171. The patent still whiskey, as you have told me, is best used as blended, and you have also said that you do not sell much of it as compared with your blended whiskey?—Our own particular firm do not.

10172. I am speaking of your own firm. How do you account for the fact that you sell less, comparatively, of the pure whiskey?—Because we lay ourselves out to sell the blend. We advertise it.

10173. But if persons came and said to you: "We prefer the patent still whiskey pure," you would give it to them?—In late years, yes; but a few years ago we would not.

10174. They do not come and say so?—We have to meet the demand now—competition.

10175. That is what I put to you some little time ago. You have to meet the demand?—Yes.

10176. And the demand goes more for the blend than for the pure?—Yes.

10177. Can you see any objection whatever to this blended whiskey being sold under the name of whiskey?—Not the slightest.

10178. To your knowledge has it been so sold?—It has been so sold, as far as I can find by our own firm, ever since it was brought into the place.

10179. When first did you commence blending?—I connot answer that—blending in the sense of mixing pot and patent still—because we really cannot find out the earliest date at which we got the patent still into the place.

10180. You can tell me the minimum number of years you know of. Has it been going on for thirty or forty years?—Far longer than that.

10181. And it has been sold as whiskey?—Yes.

10182. Of course you, I presume, think it right that if this whiskey comes from you in Ireland it should be called Irish whiskey?—As a trader, yes; but as an individual I do not see how you are going to prove it.

10183. I am not asking you about that; but if you had to designate it, as a mere matter of conversation, would not the conversation be that if it was whiskey made in Belfast it should be called Irish whiskey? Never mind about the legal difficulties?—What about the Scotch whiskey made in Ireland?

10184. I am asking you about Irish?—As Irishmen, they should drink Irish whiskey.

10185. Surely it is right that Irish whiskey should be called Irish whiskey?—My difficulty is, what is whiskey? and then, after that, comes in how are you to discriminate between the two?

10186. Some whiskey is made in Ireland is it not?—Yes.

10187. Is not that Irish whiskey?—But what about the Scotch whiskey that I make? I cannot place myself in that position.

10188. When you refer to Scotch whiskey I presume you mean what we call Scotch whiskey?—Yes.

10189. Are you speaking now of the Scotch whiskey that you make?—Yes.

10190. Why do you call that Scotch whiskey?—Because the man in the street, if he were to take it up, would say: "It tastes smoky; it is made out of all malt, and malt dried with peat."

10191. Is it of Scotch material?—Oh, no—Black Sea barley.

10192. What is there about it that is Scotch?—Merely the fact that it is made in the same way as the men who claim the use of the name "Scotch" for their whiskey make it.

10193. Is that the process?—Yes.

10194. Is it patent still or pot still?—Pot still.

10195. Surely if you have been using the pot still whiskey why should you call it Scotch because the Scotch is also pot still whiskey? Why cannot you call it Irish?—That is my argument. The difficulty is to discriminate.

10196. (*Dr. Horace T. Brown.*) You mean to say it has the characteristic flavour of Scotch whiskey?—Yes.

10197. (*Chairman.*) Because it is made in the pot still?—It is made in the traditional Highland way.

10198. Is that a pot still?—Yes.

10199. Is it your view that if you make any Highland whiskey in a pot still you ought to call it "Scotch"?—So far as the general public are concerned at present they do not care a fig where it is made.

10200. That is not my point. I do not care whether they care a fig or not; but if you make in Ireland—say in Belfast—whiskey in a pot still, what do you call it?—Up to the present the whiskey we have sent into consumption has all been called "Irish whiskey."

10201. Whether made in a pot still or not?—Whether made in a pot still or not.

10202. What is the distinction you are drawing about Scotch whiskey made in Ireland, because if it is made in a pot still you still call it Irish?—I maintain there is no difference between whiskey produced in a pot still in Ireland and whiskey produced in a pot still in Scotland; the two over-lap so that no man living could tell they were different.

10203. I do not know what you mean by whiskey over-lapping, but if you make whiskey in Belfast in a pot still, what do you call it—Irish or Scotch?—Up to the present it has been called Irish.

10204. Would you have that continued to be called Irish?—Yes, my lord; I should be very glad.

(Adjourned for a short time.)

10205. (*Chairman.*) As regards your patent still whiskey, did that take the name of grain whiskey?—Yes, my Lord, so far as I can trace it, it automatically came into our books and has gone on ever since.

10206. There seems to be a purchase in October, 1864, of 1,500 puncheons of finest spirit made from grain and malt. That would be whiskey, of course?—Yes, but that is patent still.

10207. You have it in your *précis* "and made from grain and malt." That is patent still? This was Irish whiskey you were buying?—Yes, all made in Glasgow.

10208. For what purpose did you buy that?—In those days we bought patent still. It was brought over and blended with pot still and sold as Irish whiskey.

10209. You had your own pot still for that?—No, not in 1864.

10210. I thought you had?—No.

10211. Can you give me the date when you built your distillery?—1869, I think, was the date we built the distillery.

10212. In July, 1865, at Glasgow, you bought 400 puncheons of pure grain whiskey made only from grain. The word "only" is underlined?—I have brought here an old book that I got by accident to prove that at that date whiskey was made from something else than grain.

10213. I cannot see why you say that?—Why did we say pure grain? In 1865 we ordered 400 puncheons of grain whiskey made only from grain and the "only," although it is in 1865, is underlined.

10214. Yes. What meaning do you attach to that?—That they probably made it from sugar or molasses at that date as well as from grain.

10215. How does malt come into this definition, "made only from grain"?—They might have converted the starch with acid. Of course, this is long before my time, but I take it that in those days, and I bring this book to show it, there was whiskey other than that made from grain, but our own people seem to have known the difference and wanted that made from grain only.

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10216. That "only" must have been the opinion of your firm?—It is an old book, as you will see.

10217. I see your point that it is only from grain. Then in August, 1865, there were 1,000 puncheons of pure grain whiskey?—Yes.

10218. What is the difference to your mind between grain whiskey and pure grain whiskey?—I believe from the way they emphasised it here that they knew there was whiskey made from cereals and whiskey made from molasses, and that they wanted that which was made from cereals even in those days. That is the construction I put on these old notes.

10219. You were not manufacturing at that time?—No.

10220. What proof have you as to the use of molasses?—Personally I cannot prove it except from the books. I can give you no evidence of my own, but in these old spirit manuals and books there is not any doubt about it.

10221. Of course, we know molasses was used in England?—And in Scotland and Ireland in earlier days.

10222. That has passed away with you now, has it not?—Entirely.

10223. Now we come to the period when you built your distillery in 1869. I believe you had two patent and three pot stills?—Yes.

10224. The books call it patent and old still?—Yes, that is the way we keep it in the book.

10225. When was it that you began to have your trade with England, that is to say, any substantial volume of trade?—It must have been between 1850 and 1860, and it spread very very rapidly.

10226. What was the cause of the spread?—I believe the railways.

10227. That is carriage?—Yes.

10228. Did the quality of the whiskey about that time become what I may call milder? Did that have any effect?—I can only reason, and I do not know whether my reason is right. When they came over here with an alcoholic liquid they were competing against the alcoholic liquid that people had for consumption, which was gin, and to wean the people from gin they would not take a thing that was quite distinct from it. Irish whiskey is thinner and, roughly speaking, more resembles gin than Scotch pot whiskey.

10229. Are you speaking of Irish patent whiskey or of Irish pot whiskey?—Irish pot, because it was all pot in those days.

10230. It was until the patent came into operation. It was Irish as compared with Scotch?—Yes. That is only my own personal way of reasoning, and I do not know whether it is correct.

10231. When you began in 1869, as you tell us, you had got these patent stills at work?—Yes.

10232. Did you go on producing your patent still whiskey and sending it over to England as the trade spread?—Yes.

10233. Has the trade altered since 1869, which is 40 years now, in the direction either of pot or patent?—No, except that I believe there is more patent sold alone. They all like a thinner whiskey.

10234. Is that a patent sold alone by you, the distiller, to the merchant for the purpose of blending or to be drunk as a self whiskey?—By other distillers it is sold to blenders to re-blend. Any patent we sell, of course, is sold to the public.

10235. Do you not sell to the blenders?—No, they will not buy it; we are the same as themselves.

10236. It seems to me that the advertisement has a name to it—Dunville. It is sold for consumption as that?—Yes.

10237. It is a whiskey that you do blend?—Yes, it is a blend of pot and patent.

10238. You approve for the purpose of trade and for consumption of the blending of pot and patent?—Yes.

10239. One witness mentioned, I think, that the trade in patent still had been built up by degrees, and without much knowledge being given to the consumer. Do you agree to that?—Generally speaking, they know absolutely nothing whatever about either pot or patent any more than they do of half the foods that are made. One of the reasons why we built a distillery was because you see in the trade "So-and-So's distilleries," speaking of men who do possess distilleries, and when in 1860 or thereabouts we had this trade it was thrown up against us that we were not distillers. That was one of the main reasons of our building a distillery, and we have always made a point of showing our customers over it.

10240. We know the date of the patent still—1831. Of course, Coffey's patent still came into existence by degrees during the succeeding years. I suppose it is an expensive process to build a distillery and put in the necessary plant?—Yes. Since this inquiry has started I have been astonished at the courage of those men who built these expensive stills within so few years of their being patented and introduced. In Cork, Dublin, and Derry, roughly speaking, in 1835 they put them up, and there can have been no doubt in their minds that they were going to make whiskey.

10241. Has there ever been any secrecy about the fact of whiskey being produced from a patent still?—Not that I know of. As far as my firm is concerned we made a point of it.

10242. Of course, people in the trade must know everything as to the distinction between pot and patent?—No, unfortunately, a great many of them are still ignorant. When I say that, it is only some.

10243. I thought there was a considerable difference in price and cost of production?—So there is.

10244. If a buying trader does not know the difference, how do you think he is treated? Which whiskey does he get?—Very few distilleries—perhaps I am wrong to say a very few, but distilleries as a rule do not sell direct to the public.

10245. The trade know it?—Which end of the trade do you mean? Is it the publican or the middleman?

10246. Take the middleman first?—The middleman knows all about it.

10247. He does know all about it?—Yes.

10248. I suppose he knows that the cost of production of patent whiskey is less than the cost of production of pot?—Yes.

10249. He asks for that which he wants for blending purposes?—Yes.

10250. Then after the middleman, who is the next person you come to? Is it the merchant or the publican?—It is the publican.

10251. Does he know about it?—He knows a great deal now, because he has got educated up to it.

10252. Did he learn his knowledge at Islington?—No, but we are all getting more educated. They are a much better class of men than the publicans of 30 years ago.

10253. For trade purposes does he know the difference between pot and patent, and does he ask for the one or the other as he wants it? Perhaps you do not know that?—It is a difficult question to answer. Our travellers are all over the kingdom; they have certain standard blends, and if they go to a man who has been in the habit of getting a particular sort, he is simply told, "Send me the same as last." There is no discussion as to what it is made of, or anything of that sort at all.

10254. Your travellers go in and they know that they have to sell Dunville whiskey?—Yes.

10255. What I want to know is, does a publican know the difference between pot and patent?—Yes, a great many, but there a few who do not.

10256. Now take the bulk, the persons who know. Do they ask for one or the other or do they leave it to the traveller to send which he likes?—Again, that is a very difficult question to answer. If a man goes in to sell them pure grain whiskey, he will tell them so, and he is a man who is known to sell that. If a man with whom we have never done business before orders whiskey from us, we send him a list of prices, and ask him which he requires, but we tell him nothing about what it is made of, or in what proportion it is blended.

10257. Supposing you are selling pot whiskey pure and patent whiskey pure, do you charge the same price or different prices?—Different prices.

10258. Does that difference appear upon your price list?—With us pure pot, excepting one of the most expensive bottled articles, would not appear, nor would plain patent spirit in our firm's list.

10259. I am speaking of your firm. If you are dealing in that way with a publican, do you sell those at different prices because they are pot and because they are patent, or does it depend upon age, or any other characteristic?—They all know that the one is cheaper than the other, and then the rest would be added.

10260. Does the publican know that?—Yes.

10261. If one is cheaper than the other, would not he order according to what his interest was with one consideration, that is cheapness, if the other things are equal to him?—I do not think that the question of cheapness altogether comes from the side of the publican. I think it is competition amongst ourselves. A traveller from one house will go to a man and say that he is selling his whiskey at 4s. Within an hour or two another traveller comes in and he finds out that the publican is paying 4s., and he says, "I will give you the same thing for 3s." Then another traveller comes in and says, "I will give you that for 2s. 9d., and the man says, "If the thing is just as good I will try it." I think that is the way the price has come down.

10262. Do you think that the publican does, as a rule, purchase the whiskey with the cheapest quotation?—In a great many cases he has tried it. I will put it in another way. I think that a great many years ago the average whiskey kept by public-houses was better than it is at present. Now the publican keeps the cheaper class, the general public have got to know that, and they ask for what they call "specials," which the publican keeps in bottles. That is the better-class whiskey, such as Dunville's V.R. or Buchanan's Black and White, and if the customer wants it, he gets it by paying a higher price for it. Formerly the publican had one average class only.

10263. Do you find in that case your customers will order from the traveller two qualities?—Yes.

10264. When the customer calls for a "special"—we will not go into the degree of the whiskey—is that at a price higher than the other whiskey?—Yes, it is. It is a word we have nothing to do with. I do not know how it has come into the Trade, but it is understood that a public-house keeps its special whiskey. It is a better class than the other whiskey.

10265. It is not your word I know, but will you tell me generally whether that which he sells as "special" would have more malt in it than the cheaper whiskey?—Not necessarily, but from a variety of causes it is a better whiskey.

10266. What are the causes?—I cannot describe them. We have each got our own blend which we believe in. It is there in open competition, and if they ask for it they can have it. They can have any whiskey that is on the shelf in the shop, and there is no forcing it on anybody.

10267. When a man comes to you and says that he wants a whiskey what selection do you make?—We would ask him to sell our "V.R." in bottle. The Excise will bear us out, I think, that the increase of bottling in bond has grown enormously in the last ten to fifteen years.

10268. What quality of whiskey do you sell to him?—We have a much better class of whiskey called special liqueur whiskey, but the demand for it is not great.

10269. How does that differ in quality?—It is really in age, and perhaps a little more of it would have been in sherry casks.

10270. I am sure that is not an evasion of the law, but there must be some substantial difference, or else you would not charge more for it?—It is chiefly in age, and in the fact that a larger proportion of the really better class will have been in sherry casks.

10271. It is the age and sherry casks?—Yes.

10272. Both those facts do constitute a different taste?—Yes they do, but not so great as you would think.

10273. You say that lately the publican has been taking a lower price whiskey?—Yes, there is no doubt about it that the prices are ever so much lower than they used to be, and I blame ourselves rather than the publican for that state of things. It is the competition.

10274. Have you found that with the lowering of the price there has been, to some extent, a lowering of the quality of whiskey resulting from the existence of tied public-houses?—I do not exactly know how to answer that question. The tied houses belong to a different body of men. In an ordinary public-house the publican can use his own discretion and in the other case the management. There are a number of these tied public-houses, which are perhaps a hundred miles away from the bench from which they are managed. The whiskey, perhaps, is taken by tender: it is difficult to describe the tied house question.

10275. I am taking the case of a tied house which has been reduced to possession by the brewer. He wants to make a profit out of it?—We have very few brewers who are the owners of tied houses who buy those very cheap whiskies. Since the Islington case there has been more of a demand to look at the whiskey to see what it is like. We have breweries on our books that in my opinion give splendid value.

10276. Do you not have any tendency at all towards the lower class of whiskey?—Not with us, for this reason, that those big firms that you probably have in your mind buy the whiskey and blend it themselves.

10277. The brewers?—Yes, there are a great many of them that have started wine and spirit places in conjunction with their brewery.

10278. In your trade you do not attribute any alteration of system to the new plan of having these tied houses?—No, I think not, altogether. I think it is largely that the men have pulled down the prices in competition. If a large brewer writes and asks us "Will you quote for a thousand up to ten thousand gallons," you can afford to take prices that you would not think of if you had to sell. I think in that way it has pulled the price down. They say: "So-and-So will take such and such a sum; can you not give us something cheaper?" and in that way the price has come down.

10279. Is it a lowering of prices on account of the large quantity, or a lowering of the quality, as the tied houses have come into existence?—I think the Excise would be able to tell you that better.

10280. You could tell us?—No; owing to our trade, it is rather difficult.

10281. (*Dr. Horace T. Brown.*) You told us that prior to the Islington case you were in the habit, I believe, of blending Scotch whiskies with your Belfast patent grain spirit?—We did so.

10282. You did that largely, I suppose?—No; we did it in one sense largely, but it only forms a small portion of our trade, which is entirely Irish; but we did it quite sufficient for evidence.

10283. This was sold as Scotch whiskey?—Yes.

10284. It was invoiced as such?—Yes.

10285. Did you bottle this blend under any special label?—It is sent out both in bulk and in bottle. We prepare a blend of our own, which we call "H.M.S.," and we get some of it bottled in Glasgow and some of it bottled at our own stores in Belfast.

10286. "H.M.S." is one of the blended whiskies you speak of?—Yes.

10287. You used to make your own Belfast patent spirit?—Yes.

10288. Do you do that now?—No, not for the Scotch whiskies.

10289. Is "H.M.S." a specially cheap whiskey?—No; it is as good as any of the dear blends.

10290. What is the value?—3s. 6d. a bottle. It is as good as any of the blends if you like the flavour.

10291. Then you told us something about making Scotch whiskey in Belfast. I think perhaps there was a little misunderstanding on this point. I understood you to say that you had made experiments in distilling whiskey of the Scotch type in Belfast from malt specially treated with peat?—Yes.

10292. Was that distilled twice in the ordinary Scotch way?—It was distilled in the Irish way.

10293. Three distillations?—Yes.

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10294. You obtained in that way whiskey which had all the characteristics of Scotch whiskey?—Yes, all the characteristics. I may add that that being our first attempt to do it we did not like to go the whole hog, as I may put it, for it had not a very marked characteristic, like Islay, and we did not want to ruin a lot of valuable whiskey.

10295. What is the nearest approach to it in the true Scotch whiskies?—It is like many of the Highland ones that we get.

10296. This I think you told us was not on the market?—No, not the Scotch; but a little pure malt whiskey was sent to America, but only a little, just as an experiment.

10297. That is maturing still, I suppose?—Yes; it is all lying in Belfast.

10298. Are we to understand that you argue that the terms Scotch and Irish whiskey should not be merely geographical?—My theory on that is that the difference used to be one of flavour, but now it seems to be question of the country of origin. Aqua vitæ was the common name of the drink in the three countries. If you are in Scotland a person there naturally asks for aqua or whiskey, and he is given the whiskey of that particular part of the country in which he is, whether he is in the Highlands or Lowlands. In the earlier days if you asked in Ireland for whiskey you got a mild flavoured whiskey; but when communication was opened up, and transit of goods made easier into England, then it became a totally different thing. Here was a thing landed on the English market. A distinction had to be drawn. The smoky, peat-flavoured one became known as Scotch, the finer or plainer flavoured one as Irish. I presume in those days they asked for aqua. I do not know whether gin came under the heading of aqua.

10299. I do not like to interrupt you, but that is rather outside the limit of this question. What I rather wanted from you was your present opinion as to whether you would consider it a legitimate piece of trading to sell whiskey having all the characteristics of Scotch whiskey, and made in Belfast, as a Scotch whiskey?—Yes. I cannot see where the purchaser is hurt in any way whatever.

10300. That brings me back to this other point, that your definition would not be a geographical one, but would be based on the special characteristics of the whiskey?—Yes.

10301. Whether that Irish whiskey is made in Scotland or the Scotch whiskey is made in Ireland?—Yes. Personally, I believe rather in the way that Dr. Buchanan put it yesterday with regard to brandies. I believe in course of years there will be a whiskey. Now they overlap in many cases so much that you could not tell where they were made, and I think it will be the whiskey rather than the district.

10302. We are talking now of the special designation of Scotch and Irish. Would you maintain that Scotch whiskey could be produced in England or in Wales?—I cannot see why not.

10303. And that it might be sold as Scotch whiskey?—I cannot see how the purchaser over the counter is hurt in the slightest.

10304. That is a logical conclusion of yours in regard to your statement that other materials than cereals have been used. I gather you would not advocate the use of materials other than cereals at the present time?—These things were all used before my time. I have had no personal experience, and I do not know what they are like.

10305. You have told us they have not been used for at least 40 years?—Yes.

10306. Would you like to see a return to that? Would you like to see perfect freedom in the use of materials in a distillery?—Decidedly.

10307. (*Dr. Adeney.*) I am not quite clear whether I thoroughly understood you this morning as to what exactly you were referring to when you were endeavouring to give us your opinion of what whiskey is?—I believe up to the present, so far as any legal restriction, or anything of that sort is concerned, that the best definition I can think of is that it is an alcoholic drink made palatable by direct distillation.

10308. What do you mean by direct distillation?—As apart from the rectification, as in gin, and compounds of that class.

10309. No attempt at rectification?—Yes.

10310. I see that your mind with regard to this definition is running very much upon past history and past practice. I gather that from you?—Yes.

10311. In that past time was it not a question of getting a stimulant rather than a specially flavoured spirit?—Entirely.

10312. So that we had designations of various kinds in the languages of the countries in which they were produced, but they all meant aqua vitæ. They had eau de vie meaning aqua vitæ and whiskey meaning aqua vitæ, referring to the stimulating qualities of the alcohol?—Yes, to the alcohol—in all countries.

10313. Of course, at that time it was not a serious question as to what the materials were, provided the distillation was carried on so as to produce a palatable article?—That is so.

10314. What was really required was palatable alcohol, if I may so call it?—Yes.

10315. That is what is in your mind?—That is so.

10316. Are not the present various classes of whiskey that are placed upon the market a matter of progress from past times? I notice you made a remark that you thought that the way of progress should be left entirely open?—That is so.

10317. But now we must not forget to protect progress so far as it has gone in the interests of the trader and in the interests of the consumer. It seems to me that many of the classes of whiskey that are on the market at the present time are distinct improvements upon the spirit of olden times, and they are prized not so much because they are stimulating, but that they give a well-flavoured beverage. Am I correct in that idea?—Yes, so far as you recognise that there is a limit.

10318. What is the limit?—The limit is that according to that argument you would get down to one distinct definite thing.

10319. Yes?—Well, that will not please all people.

10320. Will not the public demand control the direction in which that will follow?—No. You will never get the absolute one whiskey that will please all people.

10321. No, I quite agree to that. I am trying to come up to the question as to how far the trade has progressed in producing spirits which are better in quality and flavour than in past times?—I would say that they are now better, no doubt, but it has entirely been by competition.

10322. Is that wholly so? Is there not a considerable trade in well flavoured, characteristically flavoured whiskies which command prices which customers are quite willing to give provided they can get that particular flavoured article?—Yes.

10323. So that that is a progress, is it not?—No, I think not, in this way, that especially in wines and in whiskey there is nothing upon which a man depends so much as on the man that sells. He trusts almost everything to price, and if a bottle of wine is sold at 12s. he will not open one at 7s. 6d., and try for himself. In many cases, if he took them blindfold, he would perhaps prefer the 7s. 6d. one.

10324. You are speaking now of the ignorant customer who has plenty of money to pay and has not sufficient knowledge to distinguish?—It is wonderful how far that has spread. He wants a whiskey and he looks them down, and because it is a high price he takes it.

10325. As I gather from the information that some of the witnesses have placed before the Commission, there is another way of looking at the thing. For instance, we have been told by the Scotch blenders and distillers that the taste for the highest classes of malt whiskey, certainly in England, and even in Scotland, has changed. Now the desire is not for these highly flavoured thick whiskies, as I think they have been termed, but for lighter whiskies?—That is so.

10326. Therefore the public is the lever, is it not, in the matter of tasting?—Would you not rather put it in this way, that a man starts a manufactory—a distillery, and he wants to find out what the people want, and then make it.

10327. But still it is a question of flavour, so far as the present experience of the trade is concerned?—Yes, flavour only.

10328. And the flavour of Scotch whiskey, as we know it in London, for instance, genuine Scotch whiskey, whether it is a malt or a blend, has a characteristic flavour as compared with Irish?—Broadly speaking, yes; but definitely, no.

10329. What I mean to say is this, that there is a trade value—a money value in the terms Scotch whiskey and Irish whiskey—in the flavour of Scotch whiskey as known and in the flavour of Irish whiskey as known. There are trade values in those two terms?—Do you mean to the nation or to the individual distillery?

10330. I mean to the trade. The public at the present moment regards Scotch whiskey as a certain thing of a certain flavour, which flavour has certain characteristics. That education, no doubt, has been due to the past efforts of the trade; it now exists and it is of a particular value to the trade. Am I not right in that?—Yes, but then I would like to point out this.

10331. But am I right or wrong in that?—If there is that valuable thing in a manufactured article, and we in Ireland found that Scotch whiskey was going to sweep us out of existence, and that we could turn out exactly the same thing, are we to be debarred from doing so?

10332. That was not my question?—But I agreed to yours and mine followed it up.

10333. I quite see all that, and I think you ought to put it?

10334. (*Chairman.*) Supposing a person in England gave an order for a glass of Irish whiskey, and they knew what was meant, could that order be satisfied by giving him whiskey made in Scotland?—Yes.

10335. (*Dr. Adeney.*) At the present moment?—Yes, there is plenty of pot still whiskey, I am told, made in Scotland exactly in the same way as it is made in Ireland.

10336. Can you say that from your own personal observation, or is that only an opinion?—I am told that.

10337. By others?—Yes.

10338. You have told us, I think, that formerly Irish whiskey had a considerable trade in Scotland?—Yes, we had a very large trade in Scotland.

10339. And there is a considerable trade in England?—Yes.

10340. I think you told us that the Scotch blends had driven the Irish trade out of Scotland. Is that so?—Yes, that is so.

10341. What was the cause of that?—When I say that it has driven it out, the taste in Scotland has come in more for patent still. There was one witness here from Fifeshire two or three sittings ago who related our own experience exactly: there patent still whiskey had come into competition, and it is patent still whiskey that we have to sell there.

10342. I take it the Scotch blenders were up and doing, and they blended their malt with grain to suit the public taste. They produced an article that the public came to prefer to the old supplies of Irish whiskey?—Yes.

10343. Was there any attempt on the part of the Irish trade to follow a similar course? Was Irish pot still whiskey offered for sale in Scotland against the Scotch blend, and was the Scotch blend preferred? Was any attempt made on the part of the Irish trade to meet this altered taste in Scotland?—As soon as ever the trade, especially in Fifeshire and all round that district, was found to be dropping away—this is on our own part, and I cannot tell you of others—inquiries were made to find out what was the cause. There it was almost entirely patent still that was sold, and if they ordered our whiskey from that part of the world that they would get. We met them in so far as that was concerned.

10344. I do not quite understand what you mean?—As soon as ever the taste in Scotland went to the patent still or mild whiskey or a mild blend, we then lost the trade, and we met it by taking the pot still out of our blend.

10345. Did you regain your trade in Scotland?—No, not altogether, because Scotland makes such a tremendous lot of it itself.

10346. We were told by a former witness that the Irish blend he sold was cheaper than the Scotch blend. Was that a question of quality?—It would depend entirely on circumstances. I could not answer as to that.

10346a. I was trying to see whether Irish whiskey had been driven out of Scotland purely on the question of flavour, or whether it was that the question of quality came in?—We never tried to sell pure pot. Some of the pure pot men would be able to answer whether they are doing as successful a trade in Scotland now as they were thirty years ago.

10347. To the ordinary mind it is conceivable that if Scotch pot still whiskey did not suit the taste of Scotch people, probably the Irish would not. The Scotch blenders came in with their blend and suited the taste?—But Scotch pot still is much heavier. Witnesses have told you that men might drink Irish pot still and not drink Scotch pot still.

10348. Would it be a good thing for the Irish distiller to follow the Scotch practice in order to introduce his article into Scotland? He might still trade with his own produce, but do it through blends in a similar manner to the way that the Scotch blender does?—The distiller has got all his plant and has to do his best to sell his whiskey. If he wants to adapt himself to an entirely different trade, he would have to do so, and then I hold that if he starts and makes a Scotch whiskey in Belfast——

10349. What I mean is, why should he not try and perfect his own. We are told that it has a distinct flavour?—There is an opening for both.

10350. There may be a present opening for both, but I am anxious to see whether we cannot come to some idea of a fundamental definition and some grounds for classification. It seems to me if you lose the character, the reputation, and the flavour of Scotch whiskey, and the flavour of the Irish whiskey, you are in danger of entirely losing your Scotch or your Irish trade?—Not necessarily so.

10351. There is the danger of it. I do not say that it would actually follow?—May I retort by asking what is the whiskey that I made? All malt dried with peat with all the characteristics of Scotch whiskey. What is it?

10352. That, of course, I have not sufficient expert knowledge of?—But to follow out the line of argument.

10353. But is it not true that there has been for many years past all malt whiskey made in Ireland which is very close to the characteristic taste, but still it is sold as Irish whiskey, is it not?—I think it is so sold, as I said in my *précis*. You cannot define whiskey as a separate, distinct thing; it is a generic term. It is only when you further split it up into Jameson's, Buchanan's, Dunville's or Bushmill's that then you can define it.

10354. That is what I am trying to lead up to. We must first get a clear idea as to what whiskey should mean?—Yes.

10355. We must have a fundamental definition. Would you agree to a definition restricting the material for the purpose of protecting trade and leaving the way open to legitimate improvements and progress in manufacture?—Provided the definition leaves a broad enough opening for improvements.

10356. Would you agree to the addition of malt and cereals?—Certainly; if you left it cereals alone it would be broad enough.

10357. Do you think it would be desirable to crystallise at the start, as it were, the method of saccharification?—No. Suppose someone gets a method of conversion without having to go to the expense and trouble of malting, and the result is such that no person could possibly detect any difference, I fail to see why you should stereotype it now.

10358-9. The idea in my mind—although I may be quite wrong—is this: the Scotch and Irish trades have been built up on more or less definite lines, at least, as far as the materials and method of saccharification are concerned; and with respect to legitimate progress the

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trade might regard it as developable upon recognised fundamental conditions. Now, if you alter any factor in your fundamental conditions and produce a potable spirit, would it not be fairer to the present trade to call that by another name? There is no reason why such should be kept out of the market, but why should it not find its own trade?—It seems to me that all progress would be arrested if that way of looking at it were applied. I cannot think of any manufacture, in the evolution of which, if the process had been stereotyped at any stage, the general public would have benefited. In Ulster and Lancashire great sums were expended in the aggregate on hand looms, and a magnificent article was produced, namely, hand-woven linen and cotton cloth. If this argument had been applied to stop the new process, that is, the power loom, the prosperity of these two places would have been ruined.

10360. I do not follow the analogy?—It would stop all progress if all linen or cotton had to be made on the hand loom. If you were not allowed to use power it would have stopped all progress.

10361. You would not call any cotton goods, no matter how made, silk goods?—No.

10362. You would have the fundamental starting point of the fibre?—If you are speaking of cotton or linen, but it is the method.

10363. You dominate it from the starting point?—The malting process is part of the manufacture, just the same as the loom on which you weave.

10364. I do not know whether I have made myself clear. I am seeking information whether it would not be possible to start with some fundamental definition?—Personally, I have been present at every meeting, and I have read everything that I can, and I really cannot honestly see what you could do, unless you prohibit the whole sale of patent still whiskey. I have put myself in every attitude that I could think of, and I do not see how you can make the man at the counter any more aware than he is at the present minute if you had labels. One section says that you are to put on the proportions; but if you do that you will have public-houses like the side of a railway station, all covered with notices where the retailer sells in bulk. I cannot see how it can be done.

10365. My only idea is a starting point. What would you regard as brandy?—Personally, by wading through these things I have found these old definitions of brandy a long way back.

10366. Let us have the present state, because in past times it was always a question of a stimulating liquor?—I think brandy at the present day is the produce of the grape.

10367. Could you suggest a simple origin for whiskey?—Cereals.

10368. And there you leave it?—Yes.

10369. Leaving the question of conversion open?—Yes. If you can get the diastase by the pound and produce it by some patent means I do not see why you should not.

10370. You would still require the product to be judged from the flavour?—But that the public must do.

10371. It occurred to me whether you had in your mind a doubt as to an expression of opinion by some of the Scotch blenders, namely, that the patent still spirit employed for the good class of blends must be an aged spirit, as well as a pot still. Do you agree or disagree?—In our own blends we try to have both of the same age, as far as we can possibly manage it.

10372. Do you put any specific value on age as to patent still spirit?—Not to the same extent, or anything like the same extent as pot still.

10373. The Scotch blenders did not put that forward, but they gave a certain value to patent still having a considerable age?—Patent still undoubtedly improves in the same way as pot still, but to a very much less extent. It is not so marked.

10374. But there is an improvement?—Yes.

10375. I take it that must be so, because it can command a higher price, that is the matured patent still spirit as compared with the new?—You get a higher price for it. You have to, or else you would not keep it.

10376. That, of course, speaks for itself?—Yes.

10377. What do you associate in your mind with the expressions you have used of poor quality of blend?—I am rather adapting myself to the expressions I have heard here, just a low percentage of pot.

10378. And not necessarily a raw immature pot still spirit?—No. I merely use that expression because I have heard it used so often.

10379. As a matter of fact, there is some importance to be attached to it? It commands a less price, does it not, than a good blend?—Yes.

10380. I notice you yourself refer to a specially good blend that your own firm sell?—Yes, a special liqueur whiskey which is specially good.

10381. Is that simply a matter of proportion of malt?—No, it is its age, and the fact that a little more of the blend of both pot and patent will have been reserved in sherry casks.

10382. Would it be reserved in the sherry casks as a blend or would the two constituents be kept separately in sherry casks?—In our case I may say that 99/100ths of the whiskey is blended within an hour.

10383. And then it is matured?—Yes.

10384. In sherry casks?—No.

10385. I am now talking of your best quality?—No. Do not let it go on record that it is all matured in sherry casks. There are not enough sherry casks to go round. A proportion of that blend would have been in sherry casks, but I do not mean to say that it is all matured in sherry casks.

10386. Could you give us any idea what would be the age of that?—For years we have ourselves sold entirely on sample or brand, and we give no declaration of age, quality, quantity, or anything about it.

10387. You let the customer choose for himself?—Yes, we let the customer choose for himself entirely. We have a very large duty-paid stock, the reason of that being the demand in England of the publican to get the whiskey at the strength at which he wants to retail it without having to break it down himself, as it is called. When once you get it out of bond all question of age disappears. You can give no guarantee or anything else. It is not worth anything.

10388. Do I take it aright from you that your idea of the enhanced value of your best classes of blends is a question of age entirely?—It is the only thing that does add to it, and the better class of whiskey will have to have been more of it in sherry casks, and with that exception there is no difference.

10389. I have been asked by Mr. Guillemard to put to you some questions, as he, unfortunately, is not able to be here himself. This is his first question: In your *précis* you say that your theory with regard to the difference between Irish and Scotch whiskey is that it is now a question of country of origin. Having these facts, would you be in favour of prohibiting the blending of Scotch and Irish spirit to be sold as Irish or Scotch whiskies?—I am rather in a double capacity, as I am what I may call a student studying through these notes, and as a trader.

10390. Let us have both?—As an individual you cannot possibly discriminate. No chemist I have come across can possibly do it.

10391. Would an expert taster?—It could not possibly be done.

10392. Those are your individual opinions, I think?—I would like to challenge anybody to do it.

10393. Now I want to get your ideas as a trader?—As an individual I would leave the whole thing open to fair competition. You might as well try to stereotype Irish stew or Scotch broth. You do not want a definition for those. Do you follow me?

10394. Yes, but I do not quite agree with you?—You mean that you could not make Irish stew or Scotch broth in London?

10395. Yes?—It is an attempt to bring a definition on to a thing that we might feel the worse for as a general community.

10396. You must make some starting point, and I notice here you say it is impossible to give a standard definition of bread, jam, cloth, sugar or boots?—How can you? Whiskey is a generic term, the same as they are.

10397. There is one thing certain, that you cannot call bread jam, can you?—No. There is a rather more startling legal thing. I believe in the Courts there has been a case settled in which Irish roll

tobacco has been held to mean the methods of manufacture and not the country of origin. You have a Bath bun, but I do not know that Bath is any the worse through it, and the same with Everton toffee, or any of those sort of things.

10398. It seems to me that you are not quite in sympathy with the modern idea of the protection of the consumer, as regards the purity of foods and beverages?—I am, but I hold that as long as it is pure and not injurious to the public, the way it is made, or anything of that sort, should not be interfered with.

10399. I am glad to get that from you?—If it can be proved in any way to be injurious to health, or anything of that sort, we should not be allowed to sell it.

10400. And not to the prejudice of the consumer?—Certainly, I would not attempt to defend that.

10401. Then Mr. Guillemard asks: Is there any characteristic difference between Irish and Scotch patent still grain spirit?—No. I have heard men say that they could discriminate, and I can discriminate between our own whiskey and that of any leading Scotch distilleries, but if you put three or four before me from different Irish and different Scotch distilleries, I could not possibly do it. I tried a German one last week and I could not.

10402. Do you mean to say you could not distinguish a patent still spirit prepared from a mash tub composed of malt and raw grains from a patent still spirit prepared from a mash tub of potatoes?—That I cannot tell you, because I have no knowledge of what this German patent spirit was made from. If it had been passed to any traders in the kingdom they would have taken it just merely as a patent still whiskey.

10403. Have you any knowledge of the compounding trade?—A slight knowledge—not very much.

10404. Nor of the trade done in essences and cordials?—No.

10405. I can speak myself of some of the Irish trade that they go to the trouble of getting German spirit for that. They cannot use ordinary Scotch or Irish patent still spirit, so I am informed?—That is so. That is our contention. In America a lot of our whiskey was stopped, the accusation being that it was a mixture of whiskey and ethyl-alcohol. We deny that it is ethyl-alcohol, and if Dr. Harris or Mr. Bramall were here, I am sure they could prosecute us if we attempted to sell to anybody as ethyl-alcohol the produce of a patent still, as worked by any Irish or Scotch distiller. There is not a shadow of a doubt that pure absolute alcohol has (to my astonishment) a distinct whiskey smell. I do not know whether any of you have tried it, but I tried it out of curiosity after the visit of the Commissioners, and I have some here if you would like to try it.

10406. Still grain spirit as we understand it in Scotland and Ireland is in the phraseology of the compounder not sufficiently clean for his purpose?—For his purpose.

10407. Whereas he can get a patent still spirit, not necessarily a Coffey still spirit, but a patent still spirit, quite clean enough for his purposes?—Yes.

10408. So that there is that marked difference between the two classes of spirit?—It does not follow that all that comes from abroad as clean as that. I have no special knowledge, but I feel absolutely certain that the ordinary so-called German spirit of commerce would not pass the standard of ethyl-alcohol.

10409. (*Dr. Horace T. Brown.*) Are you speaking of rectified spirit?—Advisedly I am using ethyl-alcohol, which is 99 per cent. of alcohol and 1 per cent. of water, but I do not think the average German spirit would pass that standard. I cannot tell because I have no sufficient knowledge.

10410. It is an important matter this distinction of flavour between these things?—To my astonishment ethyl-alcohol, pure alcohol, had a distinct whiskey flavour.

10411. (*Dr. Cushny.*) Would not you put it the other way that whiskey has a distinct alcoholic flavour?—No. Dr. Teed held up patent still spirit and pure alcohol to a witness at Islington and he selected the wrong one. It was a test no man should have attempted under the circumstances. I myself had never until after that visit actually tried what absolute alcohol was like as a beverage. I had always thought of it as an absolutely odourless clean thing, I tried it as an experiment, and to my astonishment it had the smell of whiskey. Since this Commission started we have run a lot of malt through the patent still which will be kept for a year or two to see what we can make out of it.

10412. (*Dr. Adeney.*) You are quite sure that the absolute alcohol you referred to was a pure alcohol?—I told the local chemist what I wanted it for.

10413. You got it from a local chemist?—Yes, he is the leading chemist in the North of Ireland, and I told him what I wanted it for. I have a bottle here from Allen and Hanbury that has been untouched since they filled it, and if you try it I fancy you would be rather astonished.

10414. I am afraid we should not be very sure of our judgment unless we knew the history of it absolutely. To my knowledge there are some foreign spirits prepared from molasses or beet.

(*Dr. Horace T. Brown.*) We had it in evidence yesterday that patent still spirit was sold largely to chemists?—Yes, but that is sold to the manufacturing chemist for tinctures and things of that sort, but on the other hand there are certain oils, Croton oil is one, and there is some other oil the name of which I cannot think of for the moment, which are only soluble in pure alcohol. Aurists are very particular in getting pure alcohol for dissolving the wax.

10415. (*Dr. Adeney.*) You will forgive me being a little pressing on this point as to what you say. I take your opinion, but we would have to be very careful to be quite sure that the alcohol that you experimented with was absolutely pure alcohol?—You may be certain I could not do any better than get it where I did.

10416. Certainly. Then Mr. Guillemard's next question you have already answered, and so I will not put it to you. Then he asks: Do you operate to any extent upon duty-paid spirits away from your bonded warehouses?—Yes. I cannot tell, but I believe we are the largest, or we must be amongst the largest in the kingdom as far as duty-paid stock is concerned.

10417. Then Mr. Guillemard asks: With your knowledge of the business done with a duty-paid stock of spirits, do you think, assuming that it were made illegal to blend certain kinds of spirits, or that restrictions were to be placed on labels, any effective check could be exercised by the Revenue Officials upon such operations as blending and bottling carried on upon duty-paid premises?—No, as soon as ever it gets out of bond unless the chemist can really find out, speaking definitely, there is no earthly check.

10418. Then Mr. Guillemard asks this question: A good deal has been said about section 69 of the Spirit Act, 1880, which allows a distiller or a rectifier to add colouring or sweetening matter or any other ingredient to spirits in warehouse for exportation only. Do you think the distilling and rectifying trade as a whole would approve of some alteration in the law on this point?—I have heard that question put to other witnesses. Whilst it does not apply to our firm, because we do not do any of these operations, they would be very strongly opposed to take away any privilege. We get so very few from the Excise that to take away any would be doing wrong.

10419. Have you any knowledge of the mixing of foreign and British spirits in bond for exportation?—No, we never do so.

10420. (*Dr. Cushny.*) I think you have said that anything could be used to make whiskey in former days?—In former days they used anything. There are certain Acts that were passed that restricted whiskey, for some reason or other, from being made from grain. I presume it was on account of the Napoleonic wars, or fear of famine, or something of that sort, and I take it the distillers then had to supply the demand by making it from something else, and up to even a hundred years ago there were debates in the House of Commons as to whether they should not stop the use of grain.

10421. It was not called whiskey at that time, I suppose?—We cannot tell when the word "whiskey" became general. It was "aqua vitæ."

10422. In any case, the chief constitutents that you find in whiskey are alcohol and water?—Yes.

10423. You do not hold that pure alcohol and water, or, say, absolute alcohol diluted with 50 per cent. of

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water ever could have been called whiskey?—As a trader I say no; but as an individual I say that what all distillers in all countries have been trying to get is an alcohol, and the fact that it had these other things attached to it seems to be an accident of the country or materials from which it was derived.

10424. The end of it has been a variety of kinds of alcohol, each of which would have its own flavour?—Yes; but which flavours originally were accidents rather than design; the main search was for the intoxicant—alcohol.

10425. But pure alcohol and water could never have been called whiskey, any more than it could have been called brandy?—I would have to retort why, because it is astonishing if you tried it.

10426. It never has been called whiskey?—No, because of the expense of making pure alcohol by British methods.

10427. The name whiskey is attached to alcohol and water with a flavour?—That is so.

10428. Would any flavour do, or must you have a special flavour?—That is what I want to see—how you could standardise a flavour.

10429. You do not think any flavour would do?—I do not see how you could define or standardise any flavour.

10430. You might think of some flavours that would not do—say a peppermint flavour. That would hardly be associated with it?—If you made a liqueur.

10431. Would that be called a whiskey?—No.

10432. Unless you have a flavouring like that, I do not see why, supposing I ask for Irish whiskey, you should not supply me with Jamaica rum and call it Irish whiskey unless you go by flavour?—Up to the present it has entirely been by flavour.

10433. You are not disposed to lay any weight upon where the product is made?—Yes, as a trader I say, if you like, give us protection in Ireland, but as an individual I do not see how you could do it, because it seems to me to be wrong to attempt to make laws that you cannot enforce with certainty. You handicap the honest trader.

10434. Then I do not see why Irish whiskey should not be made of Irish malt and London spirit of any kind?—I do not see how the man at the counter is prejudiced.

10435. You look upon the London spirit practically as a dilutant?—No, it is patent still whiskey. It is a blend of the two whiskies, pot still and patent still.

10436. You would call the London spirit whiskey, would you not?—Yes, that is as an individual. As a trader, if you would give me the protection I would be glad to take it, but as an individual I do not see how you could bring yourselves to define it as anything else.

10437. (*Dr. Bradford.*) You have not any reason to think that patent still spirit is more injurious than pot still?—No. I have listened to all the evidence and tried everything——

10438. I do not mean as regards what you have heard, but from your own observation?—No.

10439. Have you any observations to make with reference to any possible injurious action of raw spirit—new spirit?—No. I have in my mind one glaring case when I had to take charge not of the distillation but of the blending operations. There was a complaint that the whiskey sent to a customer did not please him. We made inquiries where the person got the whiskey, because they had paid us a price that would have allowed us to give him the very best whiskey that we had in the place, and we found that this house was in a working-class neighbourhood East of London. We sent them a sample of whiskey that would have pleased anyone, and we sent them a sample of whiskey of the value of about 2s. 6d. The sample of the good one was returned to us as the customers would not have it at any price, and they have been getting the other ever since.

10440. The one that they kept was the newer spirit?—Yes, they kept the new spirit.

10441. (*Dr. Adeney.*) And they were paying the price of the higher quality?—Yes. I am now referring to a case that must have taken place over twenty years ago. The customer was pleased. I have even heard of a case, as to the truth of which I cannot vouch, where a man had only got one class of whiskey in his house, and if you asked for Scotch he got it out of a tap, and if you came in and asked for Irish you still got it out of that tap, and that man said that he had had no complaint.

10442. (*Dr. Bradford.*) That is rather a different question. I was only concerned with the health question. You do not know from your own experience of any evidence pointing to injurious effects from raw or new spirit?—No, it is the quantity, as far as I can tell.

10443. You attribute the action more to the alcohol than to the bye-products?—I do—the quantity of alcohol.

The witness withdrew.

Mr. F. L. Teed.

Mr. Frank Litherland Teed, recalled.

10444. (*Dr. Horace T. Brown.*) I believe you are desirous of making a short statement to the Commission by way of personal explanation?—Yes, I have here a letter. Shall I read it?

10445. Have you a statement?—No separate statement.

10446. The letter itself is in the form of a statement. Perhaps you had better read it if it contains everything you wish to put before us?—It contains practically everything. There was a subsequent letter.

10447. Will you read it and add to it if you think it requires anything to be added?—Yes. "To the Right Honourable Lord James of Hereford, G.C.V.O., Chairman of the Royal Commission on Whiskey, etc., 31, Great George Street, S.W. My Lord,—My attention has been called to certain evidence given by Sir Robert Usher, Bart., before the Whiskey Commission, more especially his answers to questions 7,874 to 7,880 and 7,994 to 7,997. The evidence there given throws grave doubt on my analytical skill, and asserts that I gave totally different results on the same whiskey when sent to me from different sources. On looking into the matter I find that on June 1st, 1906, I reported the results of two whiskies to Sir Tatton Sykes, one of which was marked 'Peters Hall and Co.' and the other 'Carlton Hotel.' To the best of my recollection both these samples came to me at the same time from Sir Tatton Sykes, and neither from Messrs. Peter Hall and Co. I certainly reported them both at the same time to Sir Tatton Sykes with the opinion that 'Peters Hall and Co.' had 50 per cent. of spirit present that was not whiskey (by which I meant and mean pot still whiskey), and that 'Carlton Hotel' was genuine pot still whiskey. The latter had a co-efficient of 443·1. On June 20th, 1906, I reported a whiskey to a Mrs. Cockburn with a co-efficient of 374·2, coupled with the opinion that it was genuine pot still whiskey. I mention this as my recollection does not tally with Sir Robert Usher's statement (7876): 'Some customers of ours in London, called Peters, Hall and Co., bought some very fine old whiskey from us, and they supplied it to Sir Tatton Sykes, who asked them to get it analysed by Dr. Teed. They got that analysis and sent it on to Sir Tatton Sykes.' Sir Robert Usher has evidently been misinformed, as I have never had any dealings with Messrs. Peters, Hall and Co., and the analysis was sent by me to Sir Tatton Sykes, who subsequently paid for it without any suggestion that it was inaccurate. I enclose copies of all three analyses and reports." I expect you have those three analyses. "On reference to the two analyses of whiskey alleged to be from the same cask, it will be seen that although the two samples are practically alike as to strength and non-volatile residue, they differ enormously in three of the constituents—aldehydes, furfural and higher alcohols. Had the difference been in only one constituent I should have felt inclined to believe that I had committed some unfortunate error of observation or record, but it is almost impossible to have made three enormous errors in the two results. That the strengths happen to be about the same is probably due to Messrs. Peters, Hall and Co. always sending out their spirit at one strength, and that the non-volatile resi-

due is the same is probably due to the same addition of colouring matter to each, the amount, 0·24 per cent., is so high as to indicate an addition of colouring matter. If Messrs. Peters, Hall and Co. had drawn attention to the discrepancy shortly after June 20th, 1906, I should have been in a position to repeat my analyses and to have satisfied myself and, I hope, also them, that the two samples were not identical, or, on the other hand would have acknowledged my three enormous errors. I may say that it is by no means an unknown circumstance that when an article is reported against another article is analysed (although called the same) with the view of showing error on the part of the analyst. It is, however, not necessary to assume that Messrs. Peters, Hall and Co. were guilty of any such trick. An error of the cellarman who drew the whiskey for Sir Tatton Sykes, or again an error of the cellarman who drew Mrs. Cockburn's sample, would explain the discrepancy quite as fully as the assumption of an error (namely, three errors) on the part of the analyst. I may point out that in the Islington cases some 11 summonses were issued, and the defence chose the particular two cases which were fought. Had there been greater errors in analyses or in conclusions in any of the cases which were not fought the defence would, in their own interests, have selected the cases with the greatest errors, either of analysis or conclusions. I do not suppose that the hearsay evidence of Sir Robert Usher—as I do not gather from his evidence that he claims to know that the two samples were identical of his own knowledge—will materially affect the attitude of the Commission in their estimate of my analytical skill." Then I ask to be recalled. I do not think I need read that part?

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10448. No?—This offer is still open:—"Should the Commission consider that any point depends on my skill or my methods, I am quite willing that they should test them by sending me half a dozen or more samples differently labelled, and consisting of as many duplicates or triplicates as they think fit, or I would submit to any other test that they think fair." That offer is open to the Commission at any time if they would like to see whether I can detect patent still spirit.

10449. I do not think it is necessary to do that. This shall appear on the Minutes of Evidence, if that will be satisfactory to you?—Yes, quite. There is one point that I wish to mention, that since writing that letter I came across the letter with which Mrs. Cockburn's sample was sent to me. In that letter all I wish to draw attention to is the preliminary statement. Mrs. Cockburn writes: "Dear Sir,—My husband having read several accounts in the papers with reference to 'What is Whiskey?' would feel more satisfied if he had the whiskey he is in the habit of drinking analysed," etc. I wish to draw the attention of the Commission to the element of romance, whether on the part of Mrs. Cockburn or on the part of Sir Robert Usher is immaterial, that exists in the transaction, I venture to suggest that the alleged intended identity of the two samples should be regarded with the gravest doubt.

(*Dr. Horace T. Brown.*) We are obliged to you.

The witness withdrew.

(Adjourned to Tuesday, June 2nd, at 12 o'clock.)

NINETEENTH DAY,

Tuesday, 2nd June, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*)

Sir WILLIAM SELBY CHURCH, called.

Sir W. S. Church.

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10450. (*Dr. Bradford.*) You are a past president of the College of Physicians, I believe?—Yes.

10451. You were for many years physician to St. Bartholomew's Hospital?—Yes.

10452. And at the present time you are consulting physician to that hospital?—Yes.

10453. Have you had a large experience in the practice of your profession in hospitals and otherwise?—Yes, some forty to fifty years.

10454. You desire to give us some evidence as regards the medicinal use of stimulants?—Yes.

10455. Will you kindly tell the Commission what stimulants are in habitual use in the treatment of disease?—I should say that brandy, whiskey, gin, and at the present time to a less extent rum, are in use amongst spirits in the medicinal treatment of disease.

10456. This Commission is mainly concerned with spirits, so we will confine ourselves to those. In the course of the last forty years that you say you have been engaged in practising your profession, have you noticed any great change in the kind of spirits that are ordered in the treatment of disease?—There has been a considerable change in what I may call the dietetic use of spirits, but not to my mind a very considerable change in the medicinal use of spirits.

10457. You would draw a distinct difference between the use of spirits medicinally and the use of spirits dietetically?—Yes.

10458. Could you indicate shortly to the Commission in what way there has been a change in the one and not in the other?—The fashion of drinking whiskey—because it is nothing more than a fashion—has very greatly increased during the last fifteen or twenty years as compared with what I remember when I was younger. When I was younger, besides brandy, if you took the supply of spirits generally, gin was a very frequent spirit used in the shape of "gin sling," whereas you never hear of such a thing or hardly ever in the London clubs, or in society at large. Now

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whiskey in society as a dietetic drink has taken the place almost completely of brandy.

10459. As regards the use of spirit medicinally in the treatment of disease, do you think there has been any such corresponding change?—Not to my knowledge.

10460. What spirit would you consider was most generally used?—Brandy is very much more largely used medicinally than any other spirit in this country.

10461. Do you think there has been any change in the last twenty years with reference to that—I do not mean with reference to the amount ordered, but with reference to the displacement of brandy by whiskey?—I should not think so. I have made some inquiries into the use of spirits in some of the London hospitals, and I have found that more whiskey is used than I should have imagined.

10462. If you have any statistics bearing on that point they would be of value to the Commission?—I have not had much time to compare the statistics, but several London hospitals have been kind enough to supply me with the special returns of the amount of spirits used for the last three or four years. I have the figures from Westminster Hospital in which the amount of brandy used during the last three years of 1905, 1906, and 1907 averaged 312 pints of brandy and 78 pints of whiskey annually.

10463. You have statistics, I believe, from a number of London hospitals?—Yes. Those figures I have given come from Westminster Hospital.

10463*a*. What other hospitals have you statistics from?—From Guy's Hospital, the London Hospital, and St. Bartholomew's Hospital.

10464. From four of the principal London hospitals?—Yes.

10465. They bear out that general conclusion that the quantity of brandy is in excess of the quantity of whiskey?—Yes.

10466. Will you give us the figures?—I can give you the averages because I have taken out the averages. At Guy's Hospital for three years the average amount used is 162 gallons of brandy and 11 gallons of whiskey. In the London Hospital the average is 319 gallons of brandy and 74 gallons of whiskey. At St. Bartholomew's the average is 266 gallons of brandy and 12 gallons of whiskey.

10467. Do I understand these are the quantities in one year or the quantities for three years?—It is the average of three years in all excepting Guy's, which is an average of four years.

10468. The average yearly consumption?—Yes.

10469. Does that apply also to the statistics from the Westminster Hospital?—The average for three years—312 pints of brandy, and 78 pints of whiskey per annum.

10470. It would seem from that that speaking generally the quantity of brandy was far in excess of the quantity of whiskey?—Yes.

10471. Now to pass to another matter. Can you give the Commission any information with reference to any difference in the medicinal action of different varieties of whiskey?—I am afraid I am quite ignorant of them. When I recommend whiskey, if it is to a patient in easy circumstances, I always recommend him to get the best old whiskey that his wine merchant could supply him with.

10472. You would attach some importance, and possibly considerable importance, to the age of the whiskey?—Certainly, that is what I should lay stress upon.

10473. Would you attach importance to any other thing, such as, for example, whether it was pot still or patent still?—I am afraid I never knew which any particular whiskey was.

10474. So I take it you have no reason to think that one or other of these varieties is specially injurious, or more injurious than the other?—I have never paid any attention to it. I should not like to give an opinion.

10475. Then to go back to the medicinal use, would you attribute the value of the whiskey mainly to its alcoholic strength, or to the other constituents which it might contain?—Personally, to its alcoholic strength.

10476. And usually that is the underlying idea when a physician prescribes it?—I believe so.

10477. He prescribes it as alcohol?—Yes.

10478. (*Dr. Cushny.*) You regard the differences between those forms of alcohol mainly as a difference in flavour?—Not wholly. There are what have been spoken of here, I think, as bye-products in alcohol, which I consider certainly have physiological action, but as to the amount of the physiological action I think we are very ignorant.

10479. You do attribute some importance to those products?—Yes.

10480. (*Dr. G. S. Buchanan.*) I think it was suggested to us that there might be a special advantage in the bye-products when you were treating acute febrile diseases, such as pneumonia. Would it be your opinion, in the case of pneumonia, or acute febrile diseases, that the one purpose for which you would give the alcoholic drink would be to get the effect of the alcohol?—I should say that the use of alcohol in acute febrile diseases is mainly for two objects, one is if we think the heart is failing we use it to stimulate the heart; but we also use it for another purpose; alcohol in properly regulated amounts appears to act as a substitute for food, which is very badly assimilated in those conditions.

10481. But in either case the essential thing would be the ethyl alcohol?—To my mind.

10482. It would hardly matter very much in cases of that kind what sort of spirit you were giving?—Oh, yes, I think it would, because I think we know that some sorts of spirit contain a larger amount of deleterious matter than others: for instance, fusel oil.

10483. In cases of convalescence after illness, or cases of illness in which the patient is perfectly well able to appreciate the difference in flavour, the dietetic action you have spoken of comes in in advising a particular form of alcoholic drink?—As I say in my *précis*, I am ignorant on the subject of what I will call the ethers and the esters and the aldehydes of alcohol, and I do not wish to give any evidence on that. The rule which I think almost all medical men work on is that they are told by chemists that most of these bodies which are deleterious, undergo certain changes by long keeping, and that if you use spirits that have been long in bottle you are much safer in avoiding any ill effects from them than if you use new spirits. Beyond that I have never really investigated the subject.

10484. (*Dr. Adeney.*) I take it when you speak of deleterious matters in the alcohol you are referring to new spirits. Do you refer to any definite facts in regard to them?—The bodies which are either associated with, or are partly derived from alcohol, are such an exceedingly difficult subject. After alcohol has been kept for a time various acids in wine act on the alcohol in different ways, and to my mind I find in practice that I have seen many cases in which a perfectly pure wine, so far as I knew, always disagreed with a person, whereas another perfectly pure wine agreed with him, and I partly explained that to probably the varying amount of acids or to the bye-products produced from the alcohol in the course of keeping.

10485. You are now referring to wines?—Yes.

10486. But what about spirits?—I have no experience of that with spirits.

10487. With regard to your remarks about the deleterious constituents in spirits you have no definite information to give us?—I have always understood in many whiskies there is a considerable percentage of fusel oil, which we know is a deleterious subject, present in new whiskey.

10488. (*Chairman.*) You have given us the relative proportions of whiskey and brandy used in various hospitals. The use of whiskey is substantial now in hospitals, is it not?—Yes, it is certainly substantial. I was surprised to find that it varied so greatly.

10489. But it is a substantial use now?—11 gallons as compared with 162 at Guy's.

10490. But at Westminster you have 312 pints of brandy as against 78 pints of whiskey. I should call 78 pints substantial?—Yes.

10491. That is a substantial use of the stimulant. Surely when you get 78 pints of whiskey used against 312 pints of brandy it is substantial?—Yes, that is at Westminster Hospital.

10492. Being substantial, how long is it since that substantial use has come into play?—I cannot say. I have no data for answering that.

10493. Is it an increasing quantity that is now being used of whiskey as against brandy?—I have only brought you the figures of three years, but I believe there have been very slight changes in the proportionate amounts of those spirits used in St. Bartholomew's for 20 or 30 years.

10494. But taking your own experience, when you commenced your early practice was whiskey at all used as a stimulant?—Occasionally.

10495. But not substantially?—No.

10496. I gather from that that there is a growing use of whiskey as a stimulant. Take your early days. Do not you think now it is used more than it was?—Very greatly.

10497. To what do you attribute that?—I put a good deal of that increase down to what I should call the dietetic use of it rather than the medical use.

10498. That is, you give the patient what the patient likes?—In hospital practice, I can only answer for my own hospital, and there, I think, that when whiskey is used it is used in that way—at least, I have used it myself in that way because when I thought my patient wanted alcohol, he asked to have whiskey.

10499. Is not that a matter of his taste? I thought that you meant by the answer that you thought that was dietetic. The patient liked it?—Yes.

10500. Then taking it from a medical point of view, what do you think of it as a competing stimulant with brandy?—I consider the alcohol in it is just as useful as the alcohol in brandy.

10501. As a stimulant as a whole with all its qualities, do you put them as quite equal as stimulants?—No. Brandy I consider for some purposes better than whiskey as a medicine; not so much for its stimulant properties, but because it has other properties.

10502. Take it as you say, not so much as a stimulant, but taking the case of an old person, where you speak of it as a substitute for whiskey, a supporting agent, as I will call it, is not brandy a more supporting agent than whiskey?—I do not know about more supporting, but I fancy it is more beneficial in this way, that it usually agrees better with the stomach than whiskey, and very often it enables the patient to assimilate food better than whiskey does.

10503. Both are useful stimulants in certain conditions?—Yes.

10504. Now a few questions which are perfectly non-scientific. If you were in the position of a chemist, and whiskey was put before you and you were asked with your chemical knowledge and chemical power of analysis what are the qualities you would wish to find in the whiskey so as to make it the best stimulant you could obtain, where would you draw the good qualities and where would you draw the bad qualities of the whiskey?—I am afraid I am not a sufficiently good chemist to answer that. I should not attempt to make an analysis myself. I lay stress myself on the percentage of alcohol present.

10505. You recommend your patients, as you say, to get old whiskey?—Yes.

10506. Why do you prefer the old to the new?—Because I have been informed by others that owing to certain very obscure chemical changes which go on in spirits when kept in quantity, either in bulk or in bottle, the deleterious substances are altered into ones which are less deleterious in old spirits.

10507. By time?—By time.

10508. And therefore you do wish to find out that these deleterious agents should be got rid of by that time?—Yes.

10509. I am afraid I cannot go into chemistry with you, but are there different qualities of whiskey according to your idea, some of which would be good for the patient and others which would be bad?—I am afraid that I have always put trust in the wine merchant, and told my patients to go to the best wine merchants.

10510. I am sure the trade will be very glad to hear that. However that is your view—that you could not say. But take, for instance, a poor person who could afford very little money and who would have to get a cheap whiskey. Would you recommend him to take that cheap whiskey and consume it?—Personally I have always recommended brandy, because brandy—by which I mean French brandy—is a pharmacopœia preparation, and that is one of the reasons why I think brandy is so very generally used by the profession.

10511. What I want to know from you is this: according to your judgment as a scientific man, must not there be some classes of whiskey that you would rather see out of your patient's room than in it?—I do not think that the medical world, the professional doctors, profess to have a knowledge of the different qualities of different forms of whiskey. They have to depend upon the manufacturer and the general reputation of the manufacturer.

10512. I know of no men possessing greater common sense than medical men. Supposing a patient says, "I am very poor, and I shall have to send round to a public-house to get some very cheap whiskey," would you advise him to do it or not?—No, I should advise him distinctly not to do it.

10513. You are of opinion that when whiskey is to be used as a medicine some care should be taken to see that the whiskey is good?—At the present moment I take it, under the Sale of Food and Drugs Act, that whiskey and British brandy both have to be of a definite alcoholic strength.

10514. But there are other things besides actual strength. We know there is some very cheap whiskey sold. Do you wish to express any opinion as to whether there should be a check put on the very cheap spirit being sold for the purpose of medical use?—I should say it was most highly advisable that a check should be placed upon cheap spirit being sold.

10515. Anywhere?—For every purpose.

10516. As we know, some spirit in its quality and strength is absolutely injurious to the person using it?—I do not think any pure ethyl alcohol is injurious to a man except in undue quantities.

10517. If it is pure alcohol, the whole question I was asking you about fails. If you assume the quality is all you can wish there is an end to what we are talking about?—But I imagine, in cheap spirits, many things are added to the spirits which make it potable, besides alcohol.

10518. (*Dr. Bradford.*) Have you any experience, as a hospital physician, of the reported deleterious action of new raw spirit?—You mean as we see the results upon patients?

10519. Yes?—Certainly I have.

10520. Can you state, from your experience, that you have seen deleterious results follow from the habitual practice of drinking raw or new spirits?—I have no knowledge of the age of the spirits that the people have drunk.

10521. It has been stated in many places that many serious results of various kinds have been produced by the habit of drinking raw spirit as distinguished from older spirit?—I can give you no evidence of my own upon that subject.

10522. (*Chairman.*) We have to thank you, Sir William Church, for the evidence you have kindly given to the Commission.

The witness withdrew.

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Professor RALPH STOCKMAN, called.

10523. (*Dr. Cushny.*) Are you Professor of Materia Medica and Therapeutics in the University of Glasgow?—Yes.

10524. You are physician to the Western Infirmary of Glasgow, and you are also in practice there as a hospital and consulting physician?—Yes.

10525. You have also practised in Edinburgh?—Yes.

10526. In the action brought by the Islington authorities you were asked by each side to give evidence?—Yes.

10527. Did you do so?—No.

10528. On what grounds did you refuse?—The grounds were that I found, on looking into the subject, that I had not the necessary knowledge or the accurate information to give evidence in a court of law, and when I tried to acquire it from conversing with colleagues and physiologists, and people who might be supposed to know, I found they were equally ignorant with myself on the difference of action between patent still and pot still whiskey and other cognate matters which were likely to crop up in the course of the legal proceedings.

10529. You found that medical and scientific literature was very deficient in any accurate observations on the difference between the different preparations of alcohol?—Yes.

10530. Then you made some experiments with the different kinds of whiskey?—Yes.

10531. Would you tell us what those were?—The question aroused my interest and the interest of my assistants in my laboratory, and we went into the matter for our own information. Our first efforts to distinguish between patent still and pot still and pure alcohol were made on rabbits, and giving them what may be called corresponding doses to what are given to men, we found there was no difference in the action on the heart. After considering the whole matter and bearing in mind that alcohol acts so definitely upon the central nervous system, and that that system is so much more developed in man, I asked my assistants if they would submit themselves to experiments, and a certain course of experiments was planned and carried out.

10532. Would you tell us what the experiments on the rabbits were first?—They were blood pressure experiments only.

10533. Would you just describe what those are?—An animal has a certain amount of blood pressure, that is to say, the pressure in the arteries is able to support a certain weight of mercury, and that varies as the heart is stimulated or as the arteries dilate or contract. The amount of the blood pressure can be measured by means of an instrument, and we instituted the experiment and administered the alcohol in different forms, but found there was no difference in the action.

10534. Were your animals anæsthetised?—Yes.

10535. That would rather lessen the value of the experiment, would it not?—That would rather lessen the value of the experiment.

10536. You next made experiments on three young medical men?—Yes.

10537. About what age were they?—They were all under 30—about 30.

10538. What sort of alcohol did you use?—We used well-known brands of whiskey. One was a highly-flavoured Highland malt pot still, eight years old. The others were two samples of patent still whiskey, one two years old and the other eight years old, and then pure alcohol diluted with water to the same extent as the whiskies.

10539. Did you give them pure whiskey or diluted whiskey?—No, the whiskey was given diluted with water. There was one part of whiskey to three parts of water.

10540. Was this given before meals or after meals?—It was given between meals, as a rule, but on a fairly full stomach—not an empty stomach.

10541. It would be rather interesting to have this a little more definitely. About how long was it after meals?—I cannot be quite definite about these actual experiments, but with myself it was always within three hours after lunch.

10542. Then what did you observe?—We observed very little action at all.

10543. But what did you look for?—We examined into the rapidity of the pulse, the strength of the pulse and the strength of the heart's action.

10544. How did you measure that?—We measured that by means of two well-known physiological instruments called the Riva-Rocci sphygmomanometer and Gärtner's tonometer. They are well known to physiologists.

10545. Do you think those instruments are sufficiently exact to measure any alteration in the strength of the heart?—I think any decided alteration—not perhaps every slight alteration, but any decided alteration.

10546. Did you find out the limits of their accuracy, or did you make any estimate with other drugs than alcohol?—Yes, I have tried them with drugs like aconite, digitalis, nitrite of amyl, and I have also tried them pretty extensively in diseased conditions, so that I am quite well acquainted with them.

10547. You are satisfied they are fairly accurate?—I am satisfied they are fairly accurate. Not very fine, but fairly accurate.

10548. What was the result of those preliminary observations on your three assistants?—We came to the conclusion that the action was the action of alcohol, and that the subsidiary products had very little effect, or no effect that our instruments or methods of observation could detect.

10549. That was your final deduction. What was your exact experimental note—how did you come to that decision?—We found that the pulse rate remained unchanged under all these different kinds of alcohol, and found that the blood pressure remained unchanged, and the only effect produced was a certain degree of drowsiness or sleepiness.

10550. And that was equal with the four different samples?—Yes, we could find no difference.

10551. Then you tried it in some cases of disease—pneumonia?—Yes, we tried patent still against pot still in certain cases of pneumonia to see if there was any difference, but we found that we could detect no difference.

10552. Then you made some more thorough investigations on the subject?—Yes, later on I thought I would like to judge of the effects upon myself, not only of the alcohol and of the different kinds of whiskey, but also of the residues and distillates on distilling at a certain temperature.

10553. Are you an abstainer?—Oh, no, I am not an abstainer.

10554. Then what did you use for those experiments?—I used a different Highland malt pot still whiskey highly flavoured, and I used one of the patent still whiskies.

10555. Can you give us the exact description?—(1) A highly flavoured Highland malt pot still whiskey, nine years old, matured in plain wood and containing 63 per cent. of alcohol by volume. (2) A patent still whiskey, three years old, containing 63 per cent. of alcohol by volume. They were both 11 over proof. Then (3) cognac brandy, twelve years old, guaranteed to contain "the ethers" and containing 46 per cent. of alcohol by volume. Then (4) absolute alcohol diluted with water to 63 per cent. of alcohol by volume, and (5) distillates and residues from Nos. 1, 2 and 3.

10556. How much of those did you take?—I took what corresponds roughly to a glass of whiskey, namely, two ounces, and of the brandy which was weaker a larger amount was taken so as to correspond in each case to 1·2 ounces by volume of absolute alcohol.

10557. And diluted?—Yes, diluted with water to four ounces, equal parts of water and of whiskey.

10558. Then you carried out experiments on each day?—Yes, each day they were made. There was usually two or three days interval, but they were made at the same hour and under exactly the same conditions.

10559. Will you describe what you did?—My idea was to approximate the conditions to something like the condition a sick person is in—quietude. I sat in a comfortable chair and did not move or talk, and nobody spoke to me unless I began to get distinctly drowsy looking. Then after my pulse and the blood pressure and heart rate, and one or two other observations had been taken for some time so as to ascertain that they were steady, I took the alcohol at one dose and then for the next hour or thereabouts the observations were continued.

10560. Your assistants took the temperature and the pulse?—Yes, and made an estimate of the blood pressure.

10561. You give the results of those experiments in a number of tables?—Yes.

10562. Could you summarise those results?—The general result was that with that dose the pulse remained practically unaffected, and my heart remained practically unaffected. The blood pressure remained just as it was before taking the alcohol, and I could discover no evidence of stimulation of the circulation. The only effect was to make me sleepy, and there was a certain degree, not very much, of disturbance of my stomach after it each time.

10563. Was your face flushed?—At the very beginning there was flushing of the face.

10564. Did you notice any difference between those different methods of taking alcohol? Did you notice that one, for example, made you drowsier than another, or were they all equal?—No, they were all practically equal, and the effects of all of them lasted practically about the same time.

10565. Then as regards the after effects on your stomach, what did you notice?—I cannot say that I did notice any difference.

10566. As far as you could make out they all had exactly the same effect?—Yes. These, of course, were only a certain number of whiskies, and they were all carefully made whiskies of their kind, or supposed to be.

10567. They were pure of their type? They were not blended in any way?—No, they were not blended in any way; they were pure of their type.

10568. (*Chairman.*) Did they come from the same merchant or from the same source?—No, they came from different sources.

10569. (*Dr. Cushny.*) When did the drowsiness commence?—It was noticeable in about ten or fifteen minutes after taking that amount of alcohol, and then it increased considerably for half an hour or so, and then began to pass off, so that I was free from the effects on my brain in perhaps an hour and ten minutes, or an hour and a quarter, or some time like that.

10570. What conclusion did you draw from those experiments?—My conclusion was that in taking these different forms of alcohol their action is essentially the action of alcohol, and that the pulse rate, the blood pressure, and the nervous system are not appreciably affected by any of the other products present. These are in such small amounts apparently that their action is quite over-borne by the alcoholic action, and I thought that the initial flushing was an action which was common not only to alcohol but to a great many other things, like pepper and mustard. Cayenne pepper will make you flush more than alcohol. It is the reflex effect on the nerves of the mouth and stomach.

10571. You did not regard it as a symptom of absorption?—No, it was too rapid. It came on within a minute or less, before it had had time to be absorbed.

10572. You will hand in the tables that you have prepared, giving the details of the experiments?—Yes. (*See Appendix I.*)

10573. Have you any impression regarding the effect of ageing on those different spirits?—I made no exact experiments with new spirits, but I got quite new specimens of the same whiskey that I had been using, the pot still Highland malt whiskey, and I got the same patent still whiskey that I had been using, also quite new, and I distilled them. I tasted them as they were given to me, and afterwards I distilled them and examined the residues and the distillates. The newer ones are much rawer and coarser to the taste. There is no doubt about it.

10574. What do you mean by "raw"? Are they more irritating or hot?—No, I would not say they are more irritating, but they have a coarser and a more unpleasant flavour. It is only an impression I could get, but I could not detect very much difference except in the flavour and the taste. This new whiskey I thought was rather repugnant.

10575. You did not notice any difference in the sleepiness or lethargy?—No.

10576. The only difference was that attributable to taste?—Yes.

10577. We have heard every now and then about some bad whiskey. What do you mean by bad whiskey?—I do not think I ever tasted really bad whiskey.

10578. Not even in Glasgow?—I only get certain kinds.

10579. What I mean is that one hears of bad whiskey being sold at fairs and markets. Have you any idea what is meant by that?—I have an idea that it is a whiskey made of cheaper materials, and not long kept, or possibly whiskey spoilt in the making, but I have no experience of that at all. I know there is such a thing, but that is all I know about it. It is sold cheap.

10580. You think it would be mainly a matter of taste, and not of other effects?—Yes, I should think so.

10581. (*Chairman.*) You did not experiment on that?—No, I have never taken bad whiskey.

10582. (*Dr. Cushny.*) Have you noticed any change in the use of whiskey as a medicinal agent in Scotland in the last 20 years or so? Is it on the increase as a medicinal agent?—I have practised in Scotland all my active life, and it has been the chief alcoholic substance used in my experience.

10583. It has always been used in larger quantities than brandy?—In my own experience, very much larger.

10584. It is used considerably in acute diseases—collapse, and failure of the heart, and so on?—Yes.

10585. Do you suppose that where whiskey is used for this purpose the bye-products are of any value, or is it simply alcohol?—I think it is simply alcohol.

10586. Do you think the same effect would be obtained from rectified spirits as from whiskey?—Yes, I think so. It may not be obtained so pleasantly.

10587. Then it is also used as a soporific, and you found it an efficient one?—Yes.

10588. And there is no difference in the soporific power of different kinds of whiskey?—In these kinds that were tested by myself there was no difference.

10589. You found the same effect from rectified spirits also?—We only tested four whiskies, of course, and they were all guaranteed to be good of their kind.

10590. But you tested them against rectified spirits?—Yes, we tested them against pure alcohol diluted.

10591. And as regards absorption you did not notice any difference in the rate at which the symptoms arose?—No, I was affected about the same time almost accurately. I have marked it in the notes of my experiments.

10592. You regard the dilatation of the blood vessels as not an absorption sign at all?—No, not an absorption sign.

10593. So you could not estimate the amount of absorption from the dilatation of the vessels?—No.

10594. With regard to the bye-products, are they poisonous at all, or did you get any effect from them at all?—I got no effect from them. I took the residue of four ounces of whiskey, that is two glasses of whiskey, but I got no effect from the residue. Of course, the part that came over first came with the alcohol, and we got the alcohol effect with that, but it was not modified. It was the same as pure alcohol practically.

10596. How did the residue taste, was it pleasant or unpleasant?—It was not very unpleasant, but it was not pleasant. It was an acid and an unpleasant taste.

10596. Do you think that pellagra might be transmitted from whiskey made from bad maize?—I should think not, but I do not know.

10597. Now with regard to another point as to which your experience in Glasgow may help us a little. Would you say that the effect of pot still whiskey is

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a more satisfying one than the patent still whiskey? We have heard over and over again from some of the witnesses that patent still whiskey creates a thirst, and others have said that it does not satisfy a man's thirst for spirit. Do you think there is anything in that?—I cannot tell you anything as regards that. Most careful men have a certain amount which they take, and they do not surpass it, whether it is pot still or patent still. I could not answer the question you put to me.

10598. Another point that has been brought up is that the pot still whiskey can be diluted more than the patent still whiskey and still give a satisfactory flavour. Do you think there is anything in that?—It is strongly flavoured, and I think there is something in that.

10599. You think in that way the alcohol might be taken more diluted in the case of pot still than in the case of patent still?—And still give you the idea that you are drinking whiskey, do you mean?

10600. Yes?—Oh, yes, I think that is so.

10601. (*Dr. Horace T. Brown.*) Did you have any analysis made of these whiskies?—No.

10602. I suppose you cannot connote your observations with analysis in any way?—No.

10603. Have you samples still of those whiskies?—Yes.

10604. It would be rather an interesting thing to have some idea at any rate of the relative amount of bye-products in your patent still whiskey and your pot still whiskey?—Yes, it would be interesting.

10605. You say, I think, that it was a very highly flavoured whiskey?—Yes.

10606. Was it a Speyside whiskey?—Yes.

10607. You have never tried the relative effect of new raw whiskey as compared with well-matured whiskey—not in the manner in which you describe?—No, not in an accurate way. I had not time to do it.

10608. The statement that you made with regard to that was simply based on your having tasted the spirit?—Yes.

10609. There, again, I think it would be of interest to get some observations?—It takes a long time, and time is valuable.

10610. (*Dr. G. S. Buchanan.*) The experiments you have told us were made, I gather, in the afternoon?—Yes.

10611. And resulted in sleepiness being common from taking that amount of alcohol at that time?—Yes.

10612. It is not in your case, I presume, the usual time at which you would take alcohol?—No.

10613. I understood you to say that in cases of collapse and illness of that kind the one important point in practice was to get the ethyl alcohol?—Yes.

10614. Is it quite the same when you are wanting to give an alcoholic liquor or to let the patient take an alcoholic liquor in case of convalescence, or in cases where you wish to stimulate his appetite?—No, I think they are quite different.

10615. There is a value in the flavouring bye-products in cases of that kind—I do not say whiskey in particular, but in distinguishing between alcoholic drinks?—Very great, I should say.

10616. An extreme case would be champagne or port, for instance, where you want the bye-products as well as alcohol?—If you want to stimulate any person's appetite you must give him something which is fairly agreeable.

10617. It must be something more than merely agreeable in the case of alcoholic liquors which differ so much. "Agreeable" is a very general term, but in treating a given case do you not want something positive in addition to the alcohol? The ethyl alcohol itself is practically tasteless, is it not, or very nearly tasteless?—No, it has got a certain taste although not a very strong one.

10618. To the extent that a grain spirit approximates to ethyl alcohol in the absence of any pronounced characteristic it might not perhaps be so useful?—I think it is probably very largely a question of taste. People who are not accustomed to whiskey would not know any very great difference except that one had a stronger taste than the other. That is probably all the comment they would make, I think.

10619. There have been observations, have there not, which show that the distillate from damaged maize may contain toxic substances which have come over in distillation?—I am not aware of them, and I cannot answer that question.

10620. (*Dr. Adeney.*) Have you had the opportunity of observing the cumulative effect on an individual of whiskey drinking? I do not mean abuse of drinking?—Do you mean over one night or over a series of years?

10621. The cumulative effect from the custom of drinking whiskey on any individual?—Oh, yes, I see a great deal of it in Scotland.

10622. Have you arrived at any conclusion as to the effect of different spirits from the cumulative point of view?—No, I cannot say that I have. I do not think that is a question that really could be answered.

10623. I was asking in my ignorance. I have just heard doctors refer to "Gin liver," which I am told in Dublin is not known, but it is largely known in London hospitals?—It is hardly known in Scotland either. It does occur, but I have very great doubts as to whether it is actually due to alcohol. I may say I see in hospital practice a large number of people who drink what is considered a great deal, but one sees very few so-called gin drinkers' livers—only just now and again.

10624. (*Dr. Bradford.*) You are a hospital physician in Glasgow?—Yes.

10625. I suppose there must be in parts of Glasgow a good deal of raw whiskey drunk?—I should think so, but I do not know anything about that.

10626. But it is probable?—Yes.

10627. As the result of your experience as a hospital physician, have you seen any peculiar incidence of alcoholic disease?—Yes, I see a great deal of disease which is contributed to more or less by alcohol.

10628. Have you seen any special kinds—any undue proportion of any particular kind?—I see alcoholic neuritis from time to time.

10629. What I was trying to get at was whether it is at all possible to attribute indirectly any particular varieties of alcoholic diseases to impure raw spirits. Can you from your experience do that?—No.

10630. You are not able to do that?—No.

10631. With reference to Dr. Adeney's question you can confirm the general statement that alcoholic cirrhosis is rare?—Yes.

10632. You have had considerable experience in Glasgow?—I have been there eleven years.

10633. And you have seen a good deal of neuritis?—Yes, a good deal of neuritis.

10634. With reference to the bye-products in highly-flavoured malt whiskies, I presume, from a medical point of view, you attribute some importance to the flavour, do you not?—Oh, yes, I attribute some importance to the flavour, but I consider it is very much a matter of taste what flavour you prefer.

10635. I do not mean in the case of healthy patients, but in the treatment of diseases. Do not you think that the question of flavour is of some importance in the medicinal use of alcohol?—I should think very little unless you are a judge of such things.

10636. You do not think it is of much importance from a digestive point of view, for example?—I can only give the same answer as I gave before, which is that the flavour ought to be pleasant and agreeable in the opinion of patients who take it as a digestive and to improve their appetite.

10637. Alcohol is very often prescribed for that purpose?—Yes.

10638. So at any rate in that class of case the question of flavour would be of some importance?—Certainly.

10639. (*Chairman.*) You have two classes of experiences, your medical experience and your general experience of what is going on in the world around?—Yes.

10640. Would the ordinary person in Scotland recognise the difference between pot still whiskey and patent still whiskey?—Oh, yes.

10641. I am speaking of the person you would meet in the smoking room of a country house or a patient you would meet in a hospital. Would they all know the difference?—Oh, yes, they have a pretty good idea.

10642. Can you form any judgment, if a man could have his way as regards price and everything else, which is the whiskey he would prefer, and so give an order for? Does the taste vary?—The taste varies to a certain extent, but, of course, most people like a certain amount of what I may call the whiskey flavour. Some of them like more and some like less, but they all like a certain amount of it, and different people have different fancies for the different flavours.

10643. If they could choose between pure pot still whiskey and pure patent still whiskey of comparatively the same age, which would they take?—I think they would nearly all take the pot still whiskey.

10644. To them it would be a better flavour?—To them it would be a better flavour.

10645. What do you say with regard to the blend? Is the blend now a popular drink?—Yes, the blend is very much drunk.

10646. It is making way?—I think so.

10647. I suppose the blend has now been a common drink for a great many years?—Ever since I remember.

10648. The patent still did not come into active play until some time after 1831?—I can only speak definitely for the last 20 or 25 years.

10649. Surely with that experience you can say the blended whiskey has increased in consumption, has it not?—I have always known about blends, so that I really cannot answer the question.

10650. You would not know whether the consumption has increased?—No.

10651. But it is drunk to a very large extent?—To a very large extent. Most of the whiskey you get now is a blend—not entirely pot still and patent still blends, but different blends of each.

10652. So far as you have known is that satisfactory both as regards the medical point of view and the dietetic point of view?—Yes, I think it is satisfactory.

10653. (*Dr. Cushny.*) My attention has just been drawn to an extract from a newspaper in which it is said that some form of whiskey was drunk and it drove a man absolutely mad. Have you any opinion to give us as to that?—Do you mean it was due to bad whiskey?

10654. Is it bad whiskey or is it the quantity that was drunk?—If you will allow me to explain, I have nothing to say about spoiled whiskies, because I know nothing about them, but in my opinion skilfully made whiskey of any kind would not do that. It is a question of quantity, and not of quality.

10655. (*Dr. Bradford.*) You mean any form of alcohol would do that?—It is the quantity that the man takes and the consequent loss of his self-control.

10656. (*Dr. Adeney.*) Would rectified spirit do it?—If he took enough, certainly.

10657. (*Chairman.*) As far as you know is there any manufacture of what you may call really bad and undrinkable whiskey so as to sell it cheaply nowadays?—Not so far as I know. By manufacture I mean the making of whiskey in distilleries, and not merely the mixing of spirits.

10658. It does not come before you in one sense, but have you heard of any such trade going on now?—No, I do not think so.

10659. Do you think distillers behave well as regards the products?—I have heard of whiskey spoilt in the making being sometimes sold.

10660. What does that come out as? Does it come out in a decomposed condition?—I expect either the fermenting or the distillation is unsuccessful in some way; I do not quite understand in what way; but I think apart from that there is no real intentionally bad whiskey made.

(*Chairman.*) The Commissioners are much obliged to you for the evidence you have given.

The witness withdrew.

DR. FRANCIS WHITTAKER TUNNICLIFFE, called.

10661. (*Dr. Bradford.*) Are you Assistant Physician at King's College Hospital?—Yes.

10662. Were you formerly Professor of Pharmacology there?—I was.

10663. Were you also a member of the Departmental Committtee on Preservatives and Colouring Matter in Food?—I was a member of that Committee.

10664. You wish to give some evidence with relation to the sale of whiskey under certain sections of the Food and Drugs Act?—If I may put it in my own words, I was asked to give my professional opinion concerning the terms of reference to this Commission, and it struck me that the subject matter really might be considered from two standpoints, from the standpoint of whether whiskey as sold at present infringes the Merchandise Marks Act or certain sections of the Food and Drugs Act, or from the standpoint as to whether whiskey as at present sold may affect the public health, and, therefore, I desire at once to go into the second of these questions.

10665. I will take you to the second question as to the way in which whiskey may affect the public health. Perhaps you would give us your views of that in your own words?—It can conceivably affect the public health in two ways: either the public may not be protected as whiskey is sold at the present time from its containing constituents injurious to health, that is to say, from it containing substances which will either remotely or directly affect their health, or the medical profession in the prescription of whiskey to the public may be prejudiced by virtue of the fact that the whiskey as supplied is not what the profession expects of it as whiskey.

10666. We will take the first head first. With reference to the injurious substances present in whiskey, have you any evidence to lay before us upon that?—As far as I know I have no evidence that whiskey even as sold in low class public-houses does contain injurious constituents to health other than ethyl alcohol. As far as I know the only substance in whiskey which does both harm and good is the ethylic alcohol in it.

10667. Do you consider that even in the new whiskies, the raw whiskies we have heard about, there are no injurious substances—I mean, other than alcohol?—I come to that question a little later on, but the point is this: that the raw strong pot still whiskey which contains a relatively high proportion of these other substances than ethyl alcohol is practically undrinkable.

10668. You mean on account of taste?—I mean on account of taste.

10669. Do you think these whiskies are undrinkable to all—does no one drink them?—I believe they are drunk occasionally at distilleries by employees and they do not appear to do them much harm.

10670. We know as physicians that many very unpleasant tasting substances are sometimes drunk as intoxicants?—Yes.

10671. So that the mere flavour, however unpleasant, will not prevent it being drunk by some people?—No.

10672. But you think that even in those cases there is no evidence of any marked injurious effect?—The only evidence I know of any marked injurious effect has been reported by Swaine, of Bristol, who reported the death of a patient who drank feints from a pot still distillery.

10673. (*Dr. Adeney.*) Was that admitted, or was any proof advanced in support of it?—The man drank the contents of the feints and low wines receiver, and he died immediately afterwards. The case is reported in the British Medical Journal, and I can give you the exact reference. That is the only instance which I have.

10674. (*Dr. Bradford.*) You do not think there is any evidence as regards any special kind of alcoholic

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disease being produced by the consumption of raw spirit?—I do not know of any.

10675. And your attention has been directed to this matter?—My attention has been directed to this matter to a certain extent, and I have had analysed for alkaloids various whiskies sold in low class public-houses, and they have not contained any; there has been no reaction for alkaloids in them.

10676. You are inclined to attribute whatever injurious effect may be produced by spirits to the alcohol?—I am.

10677. And not to the bye-products?—And not to the bye-products.

10678. With reference to the prescription of whiskey by the medical profession for dietetic purposes, would you attribute any importance to taste and flavour?—I should attribute great importance to taste and flavour.

10679. You might put before the Commission your reasons for that?—I regard whiskey even from the dietetic standpoint as essentially a preparation of alcohol, and it is important from the point of view of digestion that the patient should drink with his meals something that tastes pleasant to him. That is important from the point of view of rapidity of digestion, and from the point of view of being able to get the maximum nutriment value out of any given meal, and, therefore, in that regard it is important that there should be a large variety of whiskies to suit the large varieties of tastes which undoubtedly exist.

10680. You mean to convey to the Commission that it is flavour which materially influences the digestive process?—Yes, certainly.

10681. Therefore, in that direction pot still whiskey might have advantages over patent still whiskey?—Certainly, with some individuals it might. The proportion of pot still is also important in a given blend.

10682. But you would say that even patent still whiskey had flavour?—Yes.

10683. That it had other factors than the mere amount of alcohol present?—I should say so, yes.

10684. With reference to the ageing of whiskey, do you attribute much importance to age in improving the whiskey?—I think the effect of age upon whiskey is directly proportionate to the nature of the whiskey.

10685. Do you think it a matter of some importance that whiskey should be old?—I do. Different whiskies require different ageing to make them palatable, and hence proper, drinks.

10686. Why do you lay so much stress on age if you think new whiskies are not specially deleterious? Is it from the point of view of flavour?—Essentially from the point of view of flavour.

10687. Ageing matures the flavour?—Ageing matures the flavour, and gets rid of other substances which have a disagreeable and nasty flavour.

10688. So that it is entirely from the point of view of flavour, and not from the point of view of toxic action?—I am not prepared to say that is so absolutely. It is an exceedingly difficult question. As I say, I do not know what the injurious constituents are in raw spirit, but some people certainly think there are injurious constituents in raw spirit. I am afraid I cannot give any very definite answer to that question.

10689. But you admit it is very largely a question of flavour, and that flavour is an important matter?—Yes.

10690. Do you think that patent still whiskey improves by age also?—It does to some extent, but to a less extent than pot still whiskey.

10691. But to an appreciable extent?—To an appreciable extent.

10692. Do you think it would be possible to have a standard for whiskey?—I think it would be very difficult to have a standard with regard to the finished product because it would have to be a chemical standard if it applies simply to the finished product, and that would be a matter of extreme difficulty. It would be, further, a matter of difficulty to have a standard with regard to the manufacture of whiskey, but I think it would not be such a matter of difficulty to have a standard with regard to the materials used for the purpose of making whiskey.

10693. What would you limit the materials to?—I should limit the materials particularly. The wash must be produced from cereal grains, and the saccharifying agent must be a diastatic ferment.

10694. Would you include rice?—No.

10695. Why?—Because we do not know anything about rice. It is essentially ignorance.

10696. Not from any special injurious character of rice?—I know of no special injurious characteristics. I have heard of some, but I do not know of them.

10697–8. You think that a standard might be arrived at from the materials with which whiskey is made?—I do.

10699. Do you think there ought to be certain proportions of certain constituents?—No.

10700. For example, should there be a regulated quantity of barley?—No, I do not think that is necessary. I think that the mash should be made of cereals, and that the saccharifying agent should be a diastatic ferment.

10701. You would not lay down any limit for the proportions of the different cereals employed?—No.

10702. Have you any suggestion to make as regards the labelling of whiskey?—I think the labelling is also a question of great difficulty because it would require very complicated departmental machinery to control the labelling of a thing like whiskey. I think there ought to be a minimum standard of whiskey, and as to what whiskey is, and if people choose to make whiskey better, as they think, then they ought to label it.

10703. I do not quite follow what you mean by a minimum standard?—I think no substance should be allowed to be called whiskey which is not made in the way I have suggested, and after that if the distiller chooses to make a pure malt whiskey or a special kind of whiskey he should be entitled to label it as such.

10704. (*Chairman.*) If he likes?—If he likes—and that the person who does not make whiskey in that way should not be allowed to label it as such. Nobody should be allowed to label a whiskey as a pure malt whiskey which was not a pure malt whiskey. Everybody who uses the term "whiskey" at all should make whiskey from a mash such as I have roughly described, and that should be whiskey. Then after that there should be degrees of whiskey according to the way in which it was made.

10705. (*Dr. Bradford.*) What varieties of whiskey would you recognise?—I could not say that. That would be for the manufacturers.

10706. (*Chairman.*) This is in the interest of the seller—to place his goods in the best way he can before the public?—Yes, and he is justified in doing that, provided he states what is true.

10707. (*Dr. Bradford.*) Would you advocate, for example, whiskey, Scotch whiskey, Irish whiskey, English whiskey, and blended whiskey?—I think I should practically restrict whiskey to Scotch whiskey and Irish whiskey. I did not state it, but it would essentially follow that whiskey when made from a mash of that sort in Scotland would be Scotch whiskey, and whiskey made from a mash of that sort in Ireland would be Irish whiskey.

10708. So the definition would be a geographical one?—Yes, the specific description would be a geographical one, or might be.

10709. Scotch whiskey would have to be made in Scotland?—Clearly.

10710. It would not be a whiskey made according to a particular recipe?—No. If the distiller thought it to be in his interest to put "Scotch Whiskey" on his label he must make his whiskey in Scotland.

10711. (*Chairman.*) That would be your general kind of whiskey? You would get your special brand at the will of the producer?—That is exactly what I meant to imply.

10712. (*Dr. Bradford.*) What would you do with the blend of Scotch malt and spirit made in London?—I should not call that whiskey.

10713. But the spirit might be made from cereals in London?—I should not have it labelled Scotch whiskey.

10714. You would simply have it labelled whiskey?—Yes.

10715. (*Dr. Horace T. Brown.*) In defining the materials for the mash you would limit the conversion to that produced by a diastatic ferment?—I should.

10716. Would you necessarily limit it to a diastatic ferment produced by germination?—That is a difficult question to answer.

10717. May I ask, have you in your mind in limiting it to a diastatic ferment rather than to malt any particular process of spirit manufacture at the present moment?—No, I have not, but I have in my mind the possibility that technological advance will probably be in that direction.

10718. You believe there is such an advance?—I believe there is, but I do not know what it is.

10719. It is a diastatic process, but it is one which does not necessitate the use of malt?—Yes, I know of that process, but I do not know the details of it. The technological progress would appear to be in that direction.

10720. You would not like to limit or hamper the manufacturing process?—No, but I would rule out acid conversion absolutely.

10721. (*Dr. Adeney.*) Why would you do that?—I do not know at the present moment, but if you introduce a new substance into whiskey, such as sulphuric acid, you may bring with it a different set of bye-products.

10722. But would you not introduce an entirely new substance if you introduced anything but malt?—No, because it would be a diastatic ferment.

10723. But we have had no evidence whatever of anything else but malt?—I would not recommend it unless it had been tried, but I think any regulation of that kind should be as general as possible.

10724. But you must start from some fundamental point?—I quite agree to that.

10725. (*Dr. Horace T. Brown.*) Dr. Adeney's argument, I think, is that we have had no evidence that whiskey has been prepared from a mash saccharified by acid?—Yes, that is his argument.

10726. (*Dr. Adeney.*) Yes. I wished to know why you started from a certain point?—That is the reason.

10727. (*Dr. Horace T. Brown.*) You had at one time some idea that the aldehydes of whiskey, especially new whiskey, had some deleterious effects physiologically? Do you still adhere to those views?—I adhere to the view that the aldehydes are the most suspicious constituents of whiskey, and that in some drinks they are injurious, but that in a Scotch whiskey which is ordinarily consumed they are not present in sufficient quantity to be injurious. The drink I have in my mind is a drink that is called Eau de vie de Mark, a drink which is made from the refuse of brandy, and that drink contains a large quantity of aldehydes

10728-9. Especially furfural?—Especially furfural. It is a drink which produces the most violent headaches. That, I think, is a fact which is quite well known in the Cognac district.

10730. You made some experiments, did you not, some years ago in conjunction with Sir Lauder Brunton on the physiological action of de-aldehyded whiskies?—Yes.

10731. Were whiskies used or eaux de vie?—Whiskies. We only made a few experiments on the action of de-aldehyded whiskies on animals, and what we generally found was that the animals recovered more quickly from the effect of the whiskey if the whiskey had been previously de-aldehydeized. I do not attribute much importance to those in view of the quantity of aldehydes present in whiskey in the quantity taken by a man. I think it is unquestionably established at the present moment that a good deal of the raw flavours of pot still whiskey is due to aldehydes, because if you work with some reagent which will fix the aldehydes and keep them back the whiskey coming over is of a very different character. I have experienced that myself in the distillery.

10732. You refer in the latter part of your *précis* to the artificial method of maturation. I was going to ask you on that point whether you are familiar with Dr. Hewitt's method?—Yes. I am not only familiar with it, but in the early stage of the proceedings Dr. Hewitt and I worked on the subject.

10733. Could you tell us something of the characteristics of whiskey before and after de-aldehydeizing by that process?—The essential characteristic is that, of course, pot still whiskey, especially if made in an old-fashioned pot still with a mixed mash as made in Ireland, when it comes over is exceedingly irritating, the foreshotts are exceedingly irritating, they make you run at your eyes and nose. If you put into the whiskey still, the low wines still, a sufficient quantity of some substance that will fix the aldehydes and keep them back, those foreshotts come over with quite a different effect. They do not make you run at the eyes and you do not feel them. You do not sneeze or cough.

10734. Would the distiller turn the spirit into the spirit receiver at an earlier period?—I do not think so, because in turning the spirit into the spirit receiver he goes essentially by what is called breaking, and, as a matter of fact, in the one experiment at which I was present the spirit broke slightly earlier and at a slightly higher strength, but when the substance had been put in the low wines still the difference was slight.

10735. What is the general effect on the spirit itself?—The general effect on the spirit is that it is drinkable very much earlier.

10736. Is the change which takes place in it similar to that produced by age?—I am afraid I do not know that, the taste is similar to a certain point.

10737. It is a softer flavour?—Yes.

10738. Is it exactly the same as the other flavour?—No, I do not think so. I do not think a spirit treated in that way would be so good as a very old originally highly-flavoured whiskey.

10739. But such a spirit as that contains less aldehydes than the original spirit would have done, and considerably less furfural?—You can take out absolutely all the furfural. It is a question of taste.

10740. Do you ascribe any physiological action to the furfural in such minute quantities as it exists in malt whiskey?—I do not.

10741. You do not regard as a practical question the removal of the furfural?—I do not.

10742. (*Dr. Cushny.*) Have you made any special investigations as to the cheap whiskies?—The only investigation I made was I had them tested for volatile alkaloids. I had them analysed with regard to their coefficient of impurities, and with regard to the alcoholic strength, and with regard to the presence of poisonous volatile bases, and the result was negative in those respects.

10743. Do you think it desirable that the whiskey should be defined as being formed by a diastatic ferment, and that the diastatic ferment should not be defined further? Do you think it desirable to leave it simply "Diastatic ferment," or should the diastatic ferment be defined?—That is a very difficult question. You mean would you put "malt"?

10744. Yes?—Personally I think it would be better to leave it at "Diastatic ferment."

10745. But no diastatic ferment has ever been used except malt?—I think it has. I think there is a process in the experimental stage, if not in the actual stages now—but I am talking of a subject of which I know very little about, and which Dr. Brown knows all about.

10746. That is the amylo process you are referring to?—Yes.

10747. That is not whiskey—that is alcohol?—I thought there was a process in which it was employed in the experimental stages to whiskey. I have got that idea in my head. I may be wrong, but I do not think I am.

10748. It is only in the experimental stages with regard to whiskey?—Yes.

10749. If we have to define whiskey we cannot refer to this process which is in an experimental stage. If we say anything about the definition of whiskey we must say it is made by the diastatic ferment that is always used, namely, malt, must we not?—Yes. That is a point upon which I do not wish to be at all emphatic at all.

10750. We cannot define the whiskey of the future?—No; it would be a mistake to inhibit progress, and if you made a regulation of a specific nature with

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regard to malt it is quite conceivable that you might stop people trying to work in that direction just as has happened in regard to yeast. The use of yeast has crystallised out into pure cultures in various directions. I should put the term as general as possible.

10751. I am not objecting to the amylo process with the exception that I do not see how it bears upon whiskey; whiskey has never been formed in this way, and why should we allow for a possible future use of the amylo process? What we have to determine is what is whiskey now, and not what will be whiskey one hundred years or so hence?—Yes, I quite see your argument, and to some extent I agree with it.

10752. Would you restrict the method of fermentation at all, or would you not make any restriction as to fermentation?—To the kind of yeast, do you mean?

10753. You would not insist on it being a yeast?—No.

10754. And you would not restrict it to a method of distilling?—Nor to a method of distilling. That is my opinion.

10755. (*Chairman.*) I am afraid that one answer of yours may be misunderstood. You are not for one moment, as I understand you, saying you think there is nothing injurious in spirit drinking, or in whiskey drinking?—I think the reverse, my lord. I think there is a great deal. I am much obliged to your lordship for giving me an opportunity of saying that. I think spirit drinking as it is carried on to-day is productive of very great harm indeed, and I consider further with regard to whiskey that it is a matter of some considerable grotesqueness that in the case of the strongest alcoholic drink we have on our table we have no specific glass for measuring. We have claret glasses and sherry glasses, and hock glasses, and burgundy glasses, but no whiskey glasses, and if one goes in for a whiskey and soda, either at dinner or after dinner, one is at the mercy of a butler or parlourmaid, who dumps a quantity of whiskey into a soda-water glass. From the domestic point of view it would be quite a useful reform if the makers of æsthetic glasses would make a sort of Adam's wreath to measure exactly one ounce or two ounces.

10756. I have seldom met with a more practical witness than yourself?—One would then know at once at a luncheon, especially if you had to do any business afterwards, that before one felt the physiological action of the alcohol one might have some approximate idea of what would be likely to occur.

10757. Would you carry out your theory to the liqueur glasses you get towards the close of dinner?—No, that is going too far. I would have a wreath of some kind at the bottom of the tumbler so that you could see whether you had two table-spoons, or four table-spoons of whiskey in your glass.

10758. What I understood you to say was not that whiskey drinking was other than injurious, but that you did not attribute what was injurious to the bye-products in the whiskey, but to the alcohol?—In the main.

10759. Is your idea that the ingredients put into the whiskey by the distillers are really pure ingredients, and that there is no adulteration?—That is my experience for fifteen years odd. In the course of my private experience, or, I may say, my private amusement, I have gone into many distilleries, and I may say I have not been expected, and I have not been there to do any work for the distillers. Speaking quite generally, I have never seen unwholesome materials.

10760. The distillers did not express any view on your glass theory?—I do not think they knew of it till this moment. I think this is the first time they have heard of it.

10761. (*Dr. G. S. Buchanan.*) You take an active part, I believe, in the association called the Institute of Hygiene?—No, I do not belong to it.

10762. I want to understand about the certificates that are there given in relation to whiskies?—Do you mean the Institute in Devonshire Street?

10763. Yes?—I have nothing to do with it except that I was once asked to preside at one of their meetings, but otherwise I have no connection with it, or had anything to do with it at all.

10764. You gave evidence for the patent still distillers in the Islington case?—Yes, I did—in the first case, but not in the second case.

10765. (*Chairman.*) The Commissioners are very much obliged to you for the evidence you have given.

The witness withdrew.

Mr. A. Clarke.

Mr. Andrew Clarke, called.

10766. (*Dr. Adeney.*) You are, I believe, partner and managing director of Robert A. Taylor, Limited, pure malt distillers, Coleraine Distillery, Ireland?—Yes.

10767. They are distillers only?—Yes.

10768. What kind of whiskey do you make?—Pure malt only.

10769. How is that known in the market?—It is known as Coleraine pure malt whiskey or Coleraine H.C. whiskey.

10770. What does "H.C." whiskey mean?—House of Commons. It is our trade mark. We supplied them first in 1843. It is a ten years old whiskey.

10771. Your firm has been established some long time back?—Yes, over 80 years.

10772. You use pure malt in your process?—Yes.

10773. Do you use peat?—Not any; we use anthracite coal.

10774. So that your practice is similar to the Dublin pot still distilleries?—As regards the drying.

10775. How many distillations have you?—Three. We use the three distillation system.

10776. You are again similar to the Dublin distilleries in that regard?—I do not know; I am not sure about that.

10777. Are your stills large stills?—No; being pure malt distillers our output is not as large as that of the Dublin distilleries.

10778. (*Dr. G. S. Buchanan.*) How many gallons?—The wash still is 2,500. Then they get smaller. The finishing spirit still is much smaller.

10779. (*Dr. Adeney.*) What is the capacity of that?—I should think about 1,000 gallons.

10780. And the wash still is 2,500?—Yes.

10781. Is all your whiskey sold as self whiskey?—Principally self whiskey. We sell also for blending.

10782. What is your experience as to the kind of whiskey demanded in the North of Ireland?—The demand for better class whiskey is for self whiskey, almost entirely.

10783. And not a blend?—I should think not.

10784. Is it within your knowledge that the working man would pay an extra price for a good quality of whiskey rather than have a poor quality?—Yes, he distinguishes, and he has the whiskey he wants provided he is willing to pay, and he is as a rule willing to pay a little more.

10785. And does he ask for the all malt in preference to the blend?—I think he asks for the self whiskey always provided he stipulates at all. If he does not ask for a self whiskey he probably gets the blend.

10786. I suppose your firm have been in the practice of producing whiskey from all malt for some time back?—Always. We have never used anything but pure malt.

10787. Does the flavour approach that of the Scotch whiskey?—It is the same make as the Highland malt whiskey, but there is no peat.

10788. Do you mean to suggest by that that the flavour is similar?—I should think if you get a Highland malt without peat the flavour would then be similar except that there is a slight difference in all distilleries, probably owing to the water.

10789. You suggest that the distinctive flavour of the Highland malt is due to the peat which is absent in yours?—Yes.

10790. What is your definition of "whiskey"?—In the North of Ireland I think whiskey is understood to be the product of the pot still.

10791. From what materials?—Either the mixed mash or the pure malt. I think that up to now there has not been any evidence from pure malt distillers.

10792. Not from Ireland?—No. It is just possible that the point has been overlooked that we have pure malt distilleries there as well as in the Highlands.

10793. What material would you allow in the mash tub other than malt?—I have not any experience of the mixed mash. I should not like to hazard an opinion on that.

10794. Would you object to the general term "cereals"?—I do not really know what that covers. Do you mean grain grown in Ireland or imported grain?

10795. Maize, for instance?—I should think a pot still should not use maize.

10796. Would you allow the term "Irish whiskey" to patent still whiskey produced in Ireland?—I do not think it is known as Irish whiskey. I think it is known as patent still whiskey or patent still spirit or grain.

10797. Would you limit the materials in the mash in the production of patent still spirit?—I do not see how that can be done.

10798. You do not suggest that?—No.

10799. You do not think it should be limited to malt and cereals?—I do not think so. Do you mean Indian corn?

10800. Yes?—I should think that could not be excluded.

10801. You could not exclude that?—No.

10802. Would you exclude sugar?—I cannot go into that fully.

10803. You have no knowledge of the practice?—No.

10804. I see that you do not object to blending the pot still with the patent still?—No, I think that is such an established fact that it has to be recognised.

10805. Is that established in Ireland as well as in Scotland?—There is a large blending done in Ireland.

10806. Would you limit in any way the kind of patent still spirit that is used for that blending?—I should like it to be patent still spirit made in Ireland.

10807. In the usual way?—The usual process, but if there is no difference in the patent still (Scotch patent still is the same as the Irish patent still) I do not see as regards the consumer that it matters then whether it is all Irish patent still or not.

10808. What would you call the result?—That is the difficulty. If you have sufficient Irish pot still or pure Irish malt to cover the patent still I should call it Irish.

10809. What would you regard as an allowable limit?—I think the benefit is conferred on the blend entirely by the pot still, and it should have a fair show in making up the blend.

10810. Would you put your minimum limit?—I think there should be half and half—say, 50 per cent. of patent still and 50 per cent. of pot still.

10811. Do you insist on that in your own practice with blends?—We do not blend at all, but we have insisted on that where our name and registered title of "Coleraine" is used. We have insisted in arranging for a blend that the blend should be half Coleraine whiskey, but we do not stipulate what the other half should be. That is for the blenders.

10812. You are content in stipulating that the half should be the minimum quantity of your whiskey?—Yes, for the use of our name in the blend.

10813. Do you think it would be fair to call your whiskey Scotch whiskey?—No, I do not.

10814. Although it may approach the flavour of Scotch whiskey?—It does not except as regards the fact that it is made by the same process.

10815. Supposing you dried it with peat and it had an indistinguishable flavour from the Scotch Highland malt, would you think it right to call that Scotch whiskey?—I think if you put it to me in my own case I would rather not.

10816. I see you suggest in your *précis* that the Excise should assist in some way. Can you tell us how?—I think the Excise should be authorised to give the distiller who sends out the whiskey a guarantee that he is sending out pure malt or pure pot still, or whatever the quality of the whiskey may be. Hitherto there is no guarantee to the public except the distiller's own word. I do not see why the Excise should not support the distillers in that. We have now in the case of whiskey going to the United States to give not only the age but the material from which it is made.

10817. (*Chairman.*) That is in the American Customs?—Yes. That has recently been decided upon.

10818. (*Dr. Adeney.*) Do you think it would be quite possible for the Excise instead of labelling all the spirits as plain British spirits, to make some classification in the way you have suggested?—Certainly as regards the distillers.

10819. Do you bottle your whiskey yourself?—Yes.

10820. Have you a large trade in bottled whiskey?—Yes, we bottle principally ten year old whiskey.

10821. What is the minimum age that you sell your whiskey at?—The minimum clearances from bond would be about three years—that is clearances for duty. We bottle at ten years and fifteen years. We also bottle a whiskey to compete with the blenders at four or five years.

10822. Is four years the minimum age at which you sell your whiskey for blending?—No, it is the minimum age for bottling.

10823. What would be the minimum age for blending?—That would very much depend on the blender. He may buy the whiskey new and use it at any time he likes, but I should say about three years.

10824. Do you not put any limit of age when you limit the minimum quantity to be used for blending?—Yes, in the case of our own name being used—that would be about four years.

10825. Are you in favour of the retention of all spirits in bond for a minimum period of time?—I think it would be an advantage to the public.

10826. And an advantage to the trade?—And it would be an advantage to the trade. It would level up. I would like to see three years, but I fancy that is impracticable. At all events, I should say two years.

10827. Do you regard ageing as a part of the process of manufacture?—Yes, certainly.

10828. An important part?—Yes.

10829. (*Dr. Horace T. Brown.*) I do not quite understand your position with regard to blending. You state in your *précis* that you would not allow the product of the patent still to be called whiskey?—Oh yes, it is called whiskey, but I think it is called patent still whiskey as distinguished from Irish whiskey.

10830. May I read this passage from your *précis*: "As regards the definition of whiskey, in my opinion whiskey has always been understood to be a product of the pot still; and patent has been known as patent spirit or raw grain"?—I mean Irish whiskey—if you use the word "Irish." But I think it must be admitted that patent still spirit is known as patent whiskey, but it is qualified by the words "patent still" or "patent" or "grain."

10831. Then this statement in your *précis* does not quite give your view?—No, it is not quite accurate.

10832. (*Dr. G. S. Buchanan.*) Do you know if the people in Ireland use the term "whiskey" very much merely to designate the patent still spirit by itself?—No, I think if a man wants patent still spirit by itself, a consumer, he asks for "grain."

10833. Do you think it is generally sold to him as grain?—I think if he wants a cheap drink that is what he gets.

10834. When you bottle in bond do you put any labels on your whiskey signifying that you have bottled it in bond?—No, we are not allowed to give an Excise certificate.

Mr. A. Clarke.
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10835. Would the power of being able to say on your labels that the whiskey had been bottled at the distillery be of any use to you?—Yes, it would.

10836-7. Do you think it would assist you?—We do say "Bottled in bond at the distillery." We do not put it on the bottles, but we say so in selling. I have a bottle here which will show the Commission what I mean. (*The witness produced a bottle and explained the label to the Commissioners.*)

The witness withdrew.

Adjourned to to-morrow, at 12 o'clock.)

TWENTIETH DAY,

Wednesday, 3rd June, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Sir JAMES DEWAR, called.

Sir J. Dewar.
3 June 1908.

10838. (*Dr. Horace T. Brown.*) You are, I believe, a Fellow of the Royal Society, and late President of the Society of Chemical Industry, Past President of the Chemical Society, and Jacksonian Professor of Natural and Experimental Philosophy at the University of Cambridge?—Yes.

10839. You are also, I believe, Professor of Chemistry at the Royal Institution?—I am.

10840. You have no interest, either directly or indirectly, in any whiskey or whiskey industry or in the brewing industry?—I have no relations, either directly or indirectly, with any distillery or brewery or other agency disposing of ardent spirits.

10841. Did you give evidence in the case which is known as the Islington case?—I did. I acted then, of course, professionally; but I may tell you my position before the Commission now is that I declined to be retained. What I said to the solicitor was this: In the state of my health, and the very small amount of time I had for work of this kind, I could not appear before the Commission unless I had made a series of experiments, which I wanted to make in the other case, but which I was unable to carry out, and that if they supplied me with material, if I had anything to place before the Commission, and had the health to do it, I would carry out the work; and I hoped then that they would give a contribution towards the conduct of my researches at low temperatures. That is exactly my position.

10842. You appear, then, as an independent witness?—Absolutely unbiassed.

10843. In the Islington case I think you were retained on behalf of the defendants?—I was then.

10844. In your early days I believe you were assistant to Lord Playfair, in some of his scientific work at the University of Edinburgh?—I was assistant to Lord Playfair for many years.

10845. Will you tell us how that brought you in contact with distillery matters?—It brought me in contact with distillery matters scientifically, because at that time a great deal of work was being done on the products of the five carbon alcohols, or amyl alcohol, as you would call it now, its physiological action was being then observed, and the study of amyline and its products brought me directly into relation with the production and action of chemicals upon fusel oil.

10846. So from a very early period you have been working on this subject upon the scientific side?—Absolutely on the scientific side. I may say that from my own personal relations, which I must not keep back from the Commission, my uncle by marriage was connected with the Bernards, who were the great distillers and brewers in Edinburgh, and as a boy I was brought up and ran about the distillery and brewery belonging to them.

10847. That gave you some insight into the manufacturing processes?—Yes; before I commenced studying scientific chemistry at all.

10848. You have, I suppose, kept yourself fully abreast with the whole literature and history of distillation?—I have.

10849. You want to put in some references to some of the earlier works which were in vogue at the time when you were carrying out these investigations with Lord Playfair?—Yes; I have summarised a few, which I think would be of interest to the Commission. I have made an extract from Brande, and I have had that and some other extracts printed, as it will save referring to the books. I have first an extract from "A Manual of Chemistry, by Thomas Brande," and then an extract from Pereira; and then an extract from Gmelin's Handbook of Chemistry; and an extract from Watts' Dictionary, bearing on two points. I think these extracts tell practically their own tale. It is quite clear that in 1848 Thomas Brande, who was a great authority, says, at page 1639: "The distillers prepare a liquor called wash, for the express purpose of producing from it ardent spirit; instead of brewing this from pure malt, they chiefly employ raw grain, mixed with a small quantity only of malted grain."

10850. That was in the year 1848?—That was in the year 1848. Then he says, at page 1652: "Whiskey is also a corn spirit, and, when genuine, derives its characteristic flavour from the malt made in its manufacture having been dried over peat or turf fires; but this odour of burnt turf or peat reek is frequently given to raw corn spirit by impregnating it with peat smoke." So at that early time they seem to have been adulterating or producing an artificial whiskey, even in Scotland. Then Pereira is interesting, because it was the only book we had at that time with reference to the physiological action of alcohol. He says, at page 1939: "When the liquid is a fermented infusion of grain (wash) the spirit is denominated Corn

Spirit (Spiritus frumenti). . . . The well-known liquor Gin, Hollands, or Geneva, and Whiskey, are corn spirits flavoured. . . . Each variety of ardent spirit has an aroma peculiar to itself, which is characteristic of the substance from which it is produced. This depends on volatile oil." Then he says, at page 1940: "Corn Spirit Oil, Oil of Grain, Potato Spirit, and Fusel Oil. 500 gallons Corn Spirit give one gallon of oil." Then, at page 1955, he says: "Spiritus frumenti compositus; Compound Corn Spirit. The Spirit manufactured in the British Islands is usually obtained by distillation from fermented infusion of corn. The ardent spirits, known as Gin, Whiskey, and the various compounds are corn spirits differently flavoured. Whiskey agrees in most of its properties with Gin, from which it differs in its peculiar smoky flavour and odour; these it acquires from the malt, which is dried by turf fires. It is the national spirit of Ireland and Scotland." Then I refer to something I am going to deal with later on, with regard to the character of fusel oil and defuselation, which was a very important question in the early days. But the most important article is the article written on alcohol in this well-known work, which was well-known at that time, called "Chemistry as applied to Arts and Manufactures, by Muspratt, Volume 1," which, I think, the Commission ought to be able to refer to. It is a very long article.

10851. What is the gist of it?—I will summarise it in one minute.

10852. What is the date of it?—1866. Under the general heading "Alcohol," he begins by giving the chemical composition, and so on, and its physical properties, as we should call it now. Then, under the heading at the top "Alcohol — Whiskey," he subdivides that into "Alcoholic Liquors — Whiskey." Then he continues and gives the stages of grinding, mashing, fermenting, and distilling. He goes on then for something like 42 pages, in which every variety of still is described, and the production of their whiskey, because he says at the beginning, "The fabrication of ardent spirits is a very extensive branch of home trade. Whiskey is the staple produce in this kingdom; gin, rum, etc., are made in other countries by operations analogous to those followed in the manufacture of whiskey. Gin and rum are fictitiously made by several parties in this country; but they require an alcoholic liquor to operate upon, and for this purpose whiskey, more or less pure, is universally used. Since whiskey, then, is the principal product of the spirit manufacture of this country, preference of description will be given to it." Then he gives the whole of the methods of distillation known, and when we come to the end of distillation the heading is "Alcohol — Whiskey" again, and just at the end of this article there is a sub-heading, "The Bushmills," and he says: "Before concluding the article on malt whiskey"—he regards everything that is produced as whiskey as malt whiskey, because malt is used in the operation, and, therefore, according to him, everything is a malt whiskey—"a short account of the Bushmills may prove interesting, as this spirit is said by many to claim pre-eminence over all others, in the same manner that genuine Hollands is considered superior to any gins made in this country." Then he ends the article by a sub-article on potheen whiskey, with extracts from Morewood, and finally refers to whiskey made in the United States from Indian corn, and in Cincinnatti, where grain abounds, and he finishes the whole of this article, which is now on whiskey and its production by all the known means of distillation. Then the new article and heading is "Rectification of Spirit," which is under a separate heading altogether. So that what I say is that at this time he considered all kinds of ardent spirits produced by means of the fermentation of grain and the action of malt on malt whiskey, and that all known means of distillation kept it still whiskey, whether pot still or whether patent still. Of course, every variety of still, Stein's and others, are referred to in that article.

10853. Does he specifically refer to the patent still product, produced by the ordinary grain mashed, as a malt whiskey?—I think so, undoubtedly.

10854. That is a very unusual definition, is it not?—I do not think so, because it is all called corn spirit.

10855. But you would not give that definition of whiskey at the present day, would you?—What I am referring to is merely what was said and what was the state of knowledge in 1866 — that he classified everything as a malt whiskey that was produced by the action of malt.

10856. Whether it contained raw grain or not?—Yes, that is perfectly clear; and whether it was distilled by means of the patent still or any other variety of still.

10857. Is he not peculiar in that?—I do not think so. That is the only article that I knew of in 1866 giving a detailed account of the production of whiskey and its varieties. I did not know of any other, unless it is the reference to Morewood.

10858. Have you any further deductions to draw from those abstracts?—I do not think so. I think the Commission ought to see this article. There are various points in it, it is made perfectly clear. Then the other extracts that I have are as follows:—"Amyl Alcohol—Fusel Oil. Extract from Gmelin's Hand-Book of Chemistry. Vol. XI., page 10. Wort prepared from malt which has been roasted with peat-smoke, as it is done in Scotland, yields, when made to undergo the vinous fermentation and distilled, a spirit (whiskey) which contains fusel oil. Wort from unmalted barley yields, after fermentation, a spirit much richer in fusel oil. But if the wort, before fermentation, be boiled with hops, the spirit obtained from it is free from fusel oil. (Glassford, Ann. Pharm., 54, 140.)"

"Extract from Watts' Dictionary, 1866, Vol. I., Alcohol. Hydrated or Aqueous Alcohol—The last portion of the acid is easily removed by distillation over a small quantity of carbonate of potash or wood ashes, and the fusel oil, which adheres more obstinately and imparts a very unpleasant odour to the spirit, is best removed by adding to the spirit about 0·7 of its weight of coarsely powdered charcoal, leaving the mixture to stand for several days and stirring it repeatedly, then decanting and distilling."

"Extract from Fusel Oil, Watts' Dictionary, 1866, Vol. II., page 75. Defuselation of Alcohol—As fusel oil imparts to alcohol a very unpleasant taste and smell, it becomes a matter of great importance to the distiller to remove it from all spirits intended for drinking. The complete removal of the fusel oil is, however, a matter of considerable difficulty, and, indeed, is seldom attained on the large scale. . . . In the modern stills, constructed so that the more condensable portions of the vapour may be liquefied, by far the greater portion of the fusel oil is thus removed at once, together with the water, and a comparatively pure distillate is obtained. Still, however, a certain portion of the fusel oil always defuses into the alcohol vapour and passes over with it."

10859. You are familiar, I suppose, with both the pot still form of distillation and also with that of the patent still?—Yes.

10860. And with the products obtained from those?—Yes.

10861. What would be your definition of "Whiskey"?—My definition of "Whiskey" is one that I gave, I think, before the magistrate, and I think I cannot do better than repeat what I said to the magistrate when I was asked that question. "It is a generic name given to the varieties of ardent spirit, spirit as prepared in Ireland and Scotland from the distillation of a fermented infusion of grain technically called a wash." That sums up to the chemist what is the meaning of the word "Whiskey." It sums up scientifically the definition of "Whiskey." I adhere to that.

10862. Would you limit in any way the mode of saccharification of the grain for the production of that wash?—As carried out—that means certainly the use of malt.

10863. Do you mean barley malt necessarily?—All my experience, of course, is connected with barley malt.

10864. You would regard the saccharification of the grain by malt as being an essential portion of your definition?—Certainly; because I have said deliberately "as carried out—as prepared in Ireland and Scotland." I know of no preparation of whiskey at all in Ireland or Scotland otherwise than by the use of malt.

10865. You would deliberately exclude any process for saccharifying the grain by means of acid, for instance?—Certainly.

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10866. Do you know anything of the new amylo process for the preparation of spirit?—I have only read of it.

10867. You know, I daresay, that malt is not used as the saccharifying agent?—I know a microbic material is the agency there and you are using then, of course, a living thing to do it.

10868. You would exclude that process?—I am not prepared to say that. I would not exclude any advance of scientific knowledge if the product that results is substantially of the same class.

10869. But I understood you to say you regard the use of malt, or, at all events, germinated grain, as an essential portion of the mash?—I say so within my experience and as so far conducted in Scotland and Ireland.

10870. You are aware, I have no doubt, that although the conversion of the grain is not made by a diastase of malt, it is made by a diastase secreted by some of these micro-organisms?—Undoubtedly, and a subsequent fermentation is done by another agency.

10871. With regard to your definition of Scotch and Irish whiskey, I believe you would make those purely geographical?—Yes. I think they are as stated by Brande and Pereira the national spirits of Scotland and Ireland.

10872. Would you admit that a spirit made by a similar process in England should be regarded as whiskey?—Not as Scotch whiskey.

10873. But as whiskey?—That is a question, I think, that is one naturally for the Commission with all due respect.

10874. (*Chairman.*) We want your assistance?—It is a question of the product. You can make an artificial claret if you choose in England, or you can make an artificial whiskey in England which would resemble Scotch whiskey, but I say it will be for the Commission to determine whether that shall be called by some separate name. It would undoubtedly then be an English product.

10875. (*Dr. Horace T. Brown.*) But you have said in your *précis* that you would consider a product produced from a fermented infusion of grain, saccharified by malt in England, a whiskey?—It would be, of course, an English whiskey.

10876. You would regard it as whiskey?—Yes, it would be a whiskey if it had the characteristics of the Scotch or Irish whiskey. It might be either the one or the other.

10877. You state that you have for the last 30 years bought and used in your household patent still whiskey?—Yes.

10878. Can you tell us something more about that as to its characteristics and so forth?—The only characteristics of that material are what I fully described to the magistrate and which can be found in my evidence. It really arose on a visit which the late Sir Frederick Abel and myself had to make to Scotland in connection with some explosive matters, and at the chemist's house we found a very delicious whiskey; we both liked it very much, and when I came south to Cambridge I made inquiries after getting a present of a little jar at Christmas containing some three gallons, as to whether or not that whiskey could be procured. All I can say is that both Sir Frederick Abel as long as he lived and I continued to use it. At that time I did not know whether it was the product of the patent still or the pot still—in fact, I did not think anything at all about it. It was simply delicious whiskey, and I have continued to use it.

10879. (*Chairman.*) What was it called?—Cambus whiskey.

10880. (*Dr. Horace T. Brown.*) That is a grain whiskey?—Yes. I submitted to the magistrate references as to the quantity which had been consumed. You will find it all in my evidence. He was quite satisfied about it, and was evidently quite surprised that I paid as much for my whiskey as he paid for his.

10881. And you did not know for some time that it was the product of the patent still?—I did not, because I never thought anything at all about it. It is like anybody else judging of whiskey—you do not ask yourself as to what particular quantity of malt is in the mash or about anything else that has been used. It was the whiskey I liked. My friends liked it, and I continued to use it, and I have done so for more than 30 years.

10882. I need scarcely ask you whether you think it is in any way deleterious?—Oh, no; and in order to settle that question I suggested at the first inquiry to Dr. Tatlock to extract all the patent still whiskies he could in order to get out the material which might be there other than alcohol, and to test the physiological action upon himself and to duplicate the samples and send them to me. He sent up all the duplicate samples, and I tried the same experiment as he did by swallowing the whole product extracted from bottles of these separate patent still whiskies without any effect whatever.

10883. Will you describe those experiments in a little more detail?—The experiments were these. The late head of the Inland Revenue, in giving evidence before the Playfair Commission, proposed and showed a mode of extraction by adding chloride of calcium in excess so as to retain the water and the alcohol after dilution and extraction with ether so as to get all the less volatile products out—not the alcohol—and in that way keeping back the alcohol; the ether was then slowly evaporated at an ordinary temperature, and then the residuary product was tested physiologically. I could find no effect whatever.

10884. What amount of whiskey did those products represent?—They represented a bottle of each variety of whiskey—the Cambus, Caledonian and so on—all the patent still whiskies that Dr. Tatlock could put his hands upon.

10885. Did you make any experiments on pot still whiskey at the same time?—No. The question arose with the magistrate as to whether or not there might be any deleterious products in the patent still whiskey that were not in the pot still. In other words, it was suggested at one time that there was a possibility of volatile basic bodies existing in the patent still which did not exist in the pot still, and, as I had at very early times along with Professor McKendrick made experiments on the physiological action of the pyridine and quinoline bases of coal tar, I was naturally interested in seeing whether any such products could be extracted.

10886. Then you found your ether extracts did contain others?—Yes, they contained some very volatile products, but I am going to submit to the Commission the actual products themselves obtained on a large scale.

10887. From these whiskies?—Yes, from the manufacture of these whiskies.

10888. You state that according to your own knowledge there is a very large quantity of pure patent still whiskey, that is the self whiskey, made in Scotland and consumed throughout the country?—Yes, I know that, because, as I said, my friend Sir Frederick Abel used it in the same way as I did, and he recommended it to a great many friends, and I have reason to know since that there has been a very large consumption.

10889. That is without being blended in any way with pot still whiskey?—Without being blended in any way with pot still whiskey.

10890. You regard such a whiskey as being entitled to the term "Scotch whiskey"?—Yes, certainly.

10891. You would not limit the apparatus used in the distillation or in the preparation of the spirit in any way?—No, I would not, of course, always within the limits that it is to produce what is known as a whiskey, namely, a flavoured alcohol.

10892. We have had some evidence as to the fractionation of the spirit by the distillation in the pot still. It has been asserted by some of the witnesses that practically no fractionation takes place in the pot still. Could you give us any information on that point?—I think the Commissioners have had so much evidence on that that they hardly need a repetition, and there is so much scientific intelligence on the Commission. It seems to me perfectly impossible, having regard to the total quantity of products yielded even as secondary products called fusel oil by the use of the patent still and as compared to the total quantity of other materials than alcohol in the pot still, that there is not a fractiona-

tion, of course, in both, only that the one is much cruder than the other.

10893. You consider, then, there is a fractionation in the process of pot still distillation?—There must be. What is the object of two or more distillations in the pot still? Simply because it is less effective.

10894. Have you any idea what the relation of the higher alcohols to the alcohol in the fermented wash would be as compared with the relation of the higher alcohols to the alcohol in the low wines or in the finished whiskey?—No, I am sorry I have not been able to make any experiments of that kind. They would require to be carried out in a distillery which would require to be put absolutely under the control of the chemist.

10895. Your statements are rather scientifically drawn inferences?—Absolutely. But the fact that you have to distil in the pot still two or three times in order to produce and take a selective product, whereas you can do it then in a more refined mode of distillation in one operation and select your product, while at the same time getting your secondary product free, is a proof in itself that it is only a question of degree.

10896. You think there is no difference in principle in the two methods of distillation?—Absolutely none.

10897. They are both fractionation methods?—That is absolutely clear. The very construction and improvements in the pot still tell their own story. If you read the reference I have given you to Muspratt all the variations that have occurred from the early Leath still and the Stein still, and the improvements in the pot still before you come to Coffey are all detailed.

10898. Have you had any experience in the effects produced by altering the speed of distillation, for instance?—We know that in the laboratory. Of course, in large operations of that kind it is very difficult to get a distiller to sacrifice the enormous quantity of alcohol for a pure experiment that the chemist wishes to carry out, but in the particular case before the Commission I asked them to distil in the patent still under a little excess of pressure and to collect the product. I analysed the product and it contained then, by increasing the boiling point a little in the same still, an enormous quantity.

10899. It was taken off at the same point?—Yes, the same point.

10900. The spirit plate was not altered?—There was no alteration in the still, but simply an increase of pressure. The product was entirely different.

10901. What was the product?—You will find it all in the analyses given before the magistrate. I think it went up to something like 6,000 per 100,000 of alcohol.

10902. That was not a potable product?—No, it was merely to prove that a very small variation in the working of the patent still could produce an enormous difference in the product.

10903. But have you ever seen produced in a patent still a product which is difficult to differentiate from the pot still product?—No, I have not seen that. I have only seen the spirit that is produced and which they desire to produce in these patent stills which contains, as we know, of secondary products something like 150, taking in the esters, acids, higher alcohols, etc.

10904. Do you think it would be possible by altering the method of working the patent still to produce whiskey of the same general character as the pot still product?—I do not doubt for one moment that it could be done if anybody directs his attention to doing it.

10905. But it has never been done?—I do not think it has been their object to do it.

10906. (*Dr. Adeney.*) In the experiment you have described, this special experiment with the patent still, was the flavour agreeable?—No, the flavour was not agreeable. It contained such a large quantity of secondary products. It was merely done to show the effect of a very slight alteration in one of the variables only. I knew by anticipation that the slightest variation, five pounds, more or less, pressure, would just make all the difference.

10907. (*Dr. Horace T. Brown.*) You would like to make some remarks on what you term synthetic whiskies?—Yes, I would.

10908. Would you tell us exactly what you mean by synthetic whiskey?—What is meant by synthetic whiskey is this: As I stated before the magistrate, having analysed and submitted to him what was the maximum variation in the secondary products in all varieties of Scotch whiskey, that they never varied more than in the proportion as a maximum of one to three, and generally as one to two even in the small amount of these flavouring materials, that it seemed to me that if a chemical standard was to be maintained or was to become formulated, then apart altogether from a variation in the mode of distillation the patent still distiller could put back again and refuselate the alcohol if the public taste so demanded it to the exact standard that was wanted. That is perfectly apparent, and he could do it by absolute weight, and there could be no doubt about it. In order to carry that experiment out I now put before the Commission something like seven varieties of what I call synthetic refuselated corn spirit so as to bring it up by adding 100 of the fusel oil to 100,000 parts of absolute alcohol. I will leave these samples, because it is a matter that you require to taste and judge of later on. It cannot be done in a minute. All the labels and bottles tell their own tale. You can take any one. In some I have used only one fusel oil and in others I have used a mixture. You can secure a combination that would be endless in the production of whiskey by giving the same amount of secondary products and all entirely different in flavour, and therefore by chemical analysis giving you exactly the same results substantially. *This* one is a mixture of two. (*Producing sample.*) I have labelled them in sequence, and I have marked them for the information of the Commission. I do not think it is advisable to say anything more, but to deal with the generalities.

10909. Have you any analysis of these whiskies?—No, I have an analysis of the base.

10910. These are not all made up with the same amount of fusel oil?—Absolutely. They are as marked on the bottles, and I will give you the analyses of the base. The base in *this* one (and in all the other synthetic whiskey samples) is a three-year-old Cambus whiskey. Unless this mixture had been made when the whiskey was new and stored for at least two or three years in wood, it would be unfair, and you could not judge at all what the flavours or the character of the body would be. The analysis would be all right, because you are adding it by absolute weight. This Cambus contained per 100,000 parts of alcohol: acid about 6, ethers about 22·4, aldehydes 19, furfural ·06, and the higher alcohols 111, making a total of 159·8. To that I have added 100 of the higher alcohols, and they have been added by direct proportions by weight from these products. These (*handing in bottles*) are the actual fusel oils themselves, and you will see how the secondary products vary from one distillery to the other, and that on merely standing in the laboratory the one oxidises and the other becomes coloured and the other remains white, and, as I would submit to you shortly, they all contain entirely different mixtures in entirely different proportions—not one of them alike.

10911. That is the different higher alcohols?—The different mixtures of higher alcohols and other products.

10912. Hence you get, according to your wish, different flavours?—Yes. Here is one with the addition of one variety of fusel oil and 50 of another per 100,000 of alcohol.

10913. Would you kindly put in a few words exactly what your object is in producing these samples?—

10914. (*Chairman.*) Would you kindly put it in popular language?—I will try to put it in popular language, and try to be as explicit as I can. I say that if a chemical standard was to be fixed, then it seems to me that it would be perfectly legitimate, instead of defuselation, which used to be well known and practised in the early days, it would now be refuselation, and, by adding more or less, then you can make any variety of whiskey which would give the amount of flavour which you defined as a chemical standard, and that would be artificially done.

10915. For the sake of the public, so that they may know what it is, would you define refuselation?—By refuselation I mean adding back to the spirit which contains only a small proportion of these higher alcohols, namely, one-third generally of the maximum amount that exists in any variety of Scotch whiskey, to add back to it another 100 parts, or 200 parts, in

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order to make it the same as the maximum of any Scotch whiskey or any variety you like.

10916. (*Dr. Horace T. Brown.*) The point is this, that you maintain that if a standard of any kind were laid down, the manufacturer would work up to it?—Certainly; and he could work up to it in more ways than one; and he could work up to it absolutely by weight, by adding the higher alcohols in the way that I have described.

10917. What would be the general effect on the whiskey?—Excellent. You try it. If you say that you like higher alcohols, the secondary alcohols in pot still whiskey, if you like that flavour and desire it, then you have it here.

10918. These fusel oils, I suppose, were obtained from the patent still?—Certainly; most decidedly.

10919. You would argue strongly against the establishment of any standard?—Certainly; very strongly. There would be all varieties. The whole variation in Scotch whiskey is in the ratio of one to three, and generally one to two. I have given all the analyses before and summarised them all.

10920. Have you had any experience of the influence of age on these synthetic whiskies, as you call them?—I have noticed already that this sample, which was a sample which has stood longer in the laboratory than these others, seems to be decidedly better, and I have no doubt whatever that if it had been in wood it would have been very much better.

10921. Of course, in glass you would not expect any change?—There is no change, but you see there is the oxidisation going on. There is change going on in the actual things themselves, and this one is decidedly more clear than the others. If you taste that that will give you the idea of what is the effect on flavour. Then I ought to give you this also as another peculiarity. Here is a sample of the solid material which you get on the distillation of the fusel oil derived from the use of all malt. The all malt product is a more complicated product than what you get from the other varieties of grain.

10922–3. The fusel oil is separated in the patent still from the all malt mash?—Yes. And the solid separated out from the dry material is one in which you would recognise the aroma as in some way connected with a distillery. That is the product, and you can easily see how a flavouring matter of that kind, when added back, gives a very potent flavour to the spirit.

10924. What is the nature of the bye-products in the patent still whiskey as compared with the bye-products in pot still malt whiskey?—It is very difficult to say. I have not had time to exhaust that problem, but if either the physiologists or yourself desire it, here are carefully fractionated samples of an all malt patent still fusel oil, the second distillation done as carefully as possible, and as elaborately as possible. There are twelve samples of the second fractionation. That will give you some idea of the complexity of the problem.

10925. (*Dr. G. S. Buchanan.*) Are they specially made?—No, not specially made. This is fusel oil from an all malt whiskey—(*referring to a sample*)—and that solid is separated out from that. That gives you an idea of the complexity. I can give you the fractionation of all these fusel oils in the first distillation, and I can give you an elaborate fractionation in the second done with the greatest possible care. That gives you some idea of the complexity of these products. Of course, then you might add any or different proportions of these fractionated products, but understand that in these synthetic whiskies I have taken simply the whole general product of the fusel oils themselves and have not fractionated.

10926. (*Dr. Horace T. Brown.*) But, generally speaking, you regard the bye-products in the different classes of whiskies as generically of the same type?—Yes, only that the solid body which has that fine aroma comes only from the use of all malt.

10927. Have you found furfural exists in freshly distilled patent still whiskey?—Not in the new patent still whiskey. As a rule, only after keeping in wood.

10928. You regard it as derived from the wood?—I do. I think in the majority of cases the patent still whiskey does not contain much furfural.

10929. Do you consider there is a complete overlapping in the amount of bye-products in various whiskies?—Yes. I made an examination of all the patent still analyses at the time of the first inquiry, and it was clearly made out that there was overlapping in the case of the Lowland malts as compared with some of the varieties of the grain.

10930. Do you think it impossible to determine on a sample of whiskey of unknown origin whether it is patent still product or a pot still product?—Of course, now, I think you might say on the average, knowing that in the case of the grain whiskies produced by the patent still that the average amount is from one-half to one-third of what it is in the Campbeltowns or the Islays, you surmise, of course, that it is the product of patent still; but the flavour would tell you in a moment.

10931. On the other hand, you have Lowland whiskies which come very near that, do you not?—Quite so.

10932. What are your views with regard to the ageing of whiskey?—My view is that I have noticed a very great difference in the rapidity with which the whiskey matures when I use it in a damp cellar in Cambridge as compared with a dry atmosphere in London. I happen to be high up in a dry atmosphere in London, as compared to a damp cellar in Cambridge, and I have noticed an enormous difference in the character of the whiskey. One gets a large quantity of water absorbed, and it gets more tannin; it gets more highly coloured, and it does not improve and mature so rapidly as in the case of a dry atmosphere in London.

10933. Have you formed any idea in your own mind as to the question of the influence of age on any possibly deleterious substances which are present in new whiskies?—I do not think there is any deleterious substance present in whiskey, even from the beginning. My observation of the difference between the character of the whiskey now kept in Cambridge and in London drew my attention to it, and that it is the right conclusion has been substantiated by the American investigation, that oxidisation is going on, you are producing acetic acid probably in a large amount, and that, of course, is producing a new proportion of esters, and you have aldehydes and esters being formed, and that goes on until a balance or equilibrium is reached. That is what I said in my evidence at the first inquiry was my explanation, and that is exactly what has been substantiated by more recent and independent inquiry. At page 530 of the evidence at the first inquiry the magistrate asked me: "Is there any change in the impurities by reason of the age in wood?" and I said "Undoubtedly, sir." "It is attributed to that perhaps that one gets the mellowness in the old whiskey that you do not find it in new, is it?"—"It is. There is no doubt whatever that there is a new equilibrium—an equilibrium between new ethers. There is an increase in the acidity in a remarkable way in the grain whiskey. You cannot have the acid in the presence of alcohol without forming a certain amount of new ether. Whatever the acid is then, it forms a new ether. That has a different aroma. Then these phenolic bodies get absorbed partly by the wood, and there is a large change going on, although it is in such small proportions absolutely that we cannot measure it." That is what I said in answer to the question as to the chemical actions that were known as going on in the maturation of whiskey.

10934. (*Dr. G. S. Buchanan.*) Can you tell us the age of the whiskey that you yourself use and which you have been commending to us?—The age of the whiskey that I use in my house is, I believe, at least six years old.

10935. Has that whiskey been matured in sherry wood?—As a rule the whiskey that I use has, and that is well known, of course, as a help. If they could get sherry casks they would always use them for maturing whiskey.

10936. Since you have known this whiskey was a grain whiskey and made in a patent still you have thought none the worse of it, and have been quite ready to tell people its origin, have you not?—Oh, yes, quite.

10937. You think that it certainly should be called whiskey?—Certainly.

10938. Would you have any objection to its being called by the distinctive name of grain whiskey if sold to the public?—I see no objection. That is, of

course, a question for the Commission, but I see no objection to that whatever.

10939. Just as there is malt whiskey and grain whiskey?—If you make a distinctive definition that malt whiskey should mean the product of an all malt mash and that grain whiskey should mean the product of grain with a proportion of malt, then it is for the Commission to define.

10940. (*Dr. Adeney.*) Is it a fair assumption from your remarks upon the effect of ageing that the secondary products do increase in amount as the result of the ageing?—Yes, there is no doubt there is an increase in the amount of acid and an increase in the amount of esters.

10941. And the higher alcohols?—There is no proof of an increase in the higher alcohols. That would involve molecular condensation which is quite unlike anything that we should anticipate.

10942. (*Dr. Horace T. Brown.*) But it may be inferred by the greater strength of the higher alcohols?—That is a secondary effect. That is why I was drawing your attention to the differences according to the temperature and atmospheric conditions, but I did not understand Dr. Adeney was putting to me the question as to the difference of constituents.

10943. (*Dr. Adeney.*) No, I was not?—I say no.

10944. Have you tested Irish patent still spirits to anything like the extent that you have the Cambus whiskey?—No, I have not. When I am in Ireland I like Irish whiskey, and when I am in Scotland I like Scotch whiskey.

10945. Do you notice any great difference between your Cambus that you are accustomed to take in your own home and the Irish whiskey that you get in Ireland?—Yes, I think they are quite a different flavour.

10946. Do you know the flavour of the Irish patent still spirit?—I have tasted it, but I cannot say I know it so well as I know the Scotch, because I do not use it.

10947. Is it distinct from the Scotch?—Yes, it is distinct so far as I have tasted it; I have not the experience of that, but we know perfectly well that no person who knows anything about whiskey can mistake an Irish for a Scotch whiskey.

10948-9. That we associate with the pot still or the blends containing a portion of the pot still?—Yes.

10950. We have had some evidence of the use of heat by naked fire in the pot still process as against heat by steam pipes. Do you regard that as an essential part of the pot still process?—I do not. That is the suggestion that there are basic bodies or bodies of the furfural type produced by some destructive distillation of the albumenoid bodies, and that they give flavour. I do not believe that. I believe the particular flavour of whiskey is due to recondite bodies that we probably know nothing about, and you will see that when you taste these very samples yourself, because the minute trace of that highly smelling solid added to whiskey would produce an enormous effect. To give you an idea of that—I will not mention any names—but the Commission can look at these samples which I call de-fuselations. (*Producing samples.*) *Here* are two whiskies, well known, and these two whiskies have simply been treated with 2 per cent. of charcoal. You will see what is the effect on these two whiskies, that are both pot still whiskies, by this 2 per cent. of charcoal. You would not recognise that they were pot still whiskies, or anything else, although one is Irish and one is Scotch.

10951. Have these been shaken?—No, they have not been shaken at all; but 2 per cent. of charcoal has been left in them and nothing done to them. You will have the chance of examining these hereafter at your leisure. That is what is called de-fuselation. You can see the names on the bottles, and you can then examine the products. As I say, that is simply the result of leaving 2 per cent. of charcoal—wood charcoal, and not animal charcoal—showing you that the whole flavour and the whole aroma and smell now deceives you.

10952. Would you regard ageing as a part of the process of the production of whiskey?—I am strongly of opinion that it would be an advantage to have whiskey matured for a certain time in wood, until it is, at any rate, in partial equilibrium. It is quite clear that this action goes on rapidly in some whiskies much more so than in others, and I cannot help thinking that the product is improved enormously by being, say, a couple of years in wood.

10953. What would you associate in your mind with that word "improve"?—It would be an improvement in this sense, that you produce then a new equilibrium; you get a new amount of esters formed, and the flavour is improved, and you get a certain amount of tannin and colour from the wood, and the aroma is helped and improved. The aroma of the whiskey has a great deal to do with the taste of it. If you have not the aroma you can be deceived absolutely.

10954. Do you associate any effect on the health of the consumer with that term "improve" that you have just used?—Oh, no. It is a matter purely of flavour and finesse. It is a matter of taste and refinement. One person likes a coarse thing and another likes a refined thing.

10955. I do not know whether it is fair to ask you the question, but your account of your early contact with distilleries suggests to me that you might be able to help us upon the question of what occurs on the putting back of feints from a given distillation to low wines for the production of whiskey?—It gives you always the certainty that you have got the vapour of these higher alcohols carried over with that portion that you are going to select as whiskey.

10956. Can you give us any explanation how it is that these feints do not overtake the distiller? Apparently they do not. There is always an equilibrium in the cycle of the distillation process?—If there is an equilibrium, then the whiskey would require to be of an absolutely constant composition.

10957. Which it is not in your experience?—It is not. It is quite clear if you have got A x B you begin with A, and you say A is a mixture of feints and foreshotts, and feints and whiskey—call it A B C. You distil that mixture A B C, and you take out B and leave A and C, and you add A and the C again, with portions of A B C. It is quite clear that by doubling the amount of A's and doubling the amount of C's you are taking out the amount of B. If you put it down on paper it would be quite incomprehensible.

10958. Do you agree with me that the only explanation of this is a loss of bye-products in the spent lees?—Yes, most decidedly.

10959. (*Mr. J. Y. Buchanan.*) You hold that there is a fractionation in the pot still process?—Yes.

10960. And that the object of the various kinds of stills was for fractionating and improving the product?—Yes, but I think the object was much more than that. The object was at that time not the production of a different whiskey, but the production of it more economically and more rapidly in one distillation. That was the object of the use of the patent still.

10961. I was coming to that. What I was going to ask you then was, do you think that Coffey, when he was working out his still, was influenced by the desire to produce a really scientific distilling method to do at once what all the pot stillers in the country were trying to do and doing badly?—No doubt.

10962. People used to talk a great deal about raw grain whiskey?—Yes.

10963. Do you think that by that expression people meant whiskey distilled when it was fermented without malt or simply a raw grain fermented either with acid or some other thing?—I think not. I should have thought that they meant that it was a mash containing not all malt, but containing some grain unfermented.

10964. I understood at one time the phrase "raw grain whiskey" was used in contra-distinction to malted grain whiskey?—All malt?

10965. Yes. Is that your opinion?—I do not think so. Within my knowledge the grain whiskey was associated simply with the production of it by means of the Coffey still.

10966. Do you think that it came to be synonymous?—Yes, that is how it generally became differentiated. But it is very difficult to get into the labyrinth of the naming of whiskey in Scotland and its production.

10967. Then you have spoken of the American experiments. Do you refer to the experiments by the American Department?—Yes, by two of the officials. It is in the journal of the American Chemical Society

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for January, 1908, and is by two of the officials of the Government, C. A. Crampton and L. W. Tolman, and is entitled "A study of the changes taking place in whiskey matured in wood." It is by far the most elaborate and important paper that has ever been published on the maturation of whiskey.

10968. You agree generally with their conclusions?—Certainly.

10969. I think if I remember rightly that they kept their whiskey in casks, under conditions something like those you describe—very dry and very hot?—Yes.

10970. 90 degrees or 100 degrees Fahrenheit?—Yes, that is quite true.

10971. They attach a great deal of importance to the diffusion which goes on along with what you describe as the etherification?—Yes, the equilibrium. They found that after a certain period of storage, it may be four or five years, there is no similar rate of increase as during the first two years. The curve of ratio of increase of variation is rapid at the beginning and falls off as it gets older.

10972. It is likely to remain constant if put into any other substance?—Yes.

10973. Their observations show that that occurred in a warm cellar after about five or six years?—Yes, they found the equilibrium was reached in about five years.

10974. And, I suppose in a cold cellar like your Cambridge one it would be much longer?—Yes, and then it gets deteriorated from the absorption of water and the tannin in the wood is much more easily dissolved. It becomes bitter.

10975. But in the American experiments and in your London cellar the water disappears, does it not?—Yes.

10976. And the strength of the whiskey is rather increased?—Yes, there is osmotic action going on through the wood.

10977. And the volume of your whiskey would diminish, would it not?—Undoubtedly.

10978. I think the Americans give some figures about the diminution of volume?—Yes, they give all that and they give also a few examples in uncharred wood. The majority of their experiments were made in charred casks, but they have given a set of experiments in uncharred casks.

10979. Then you think the charring of the casks produces something like the effect you told us of with regard to the charcoal?—No, because this is to get a flavour, and this is to take a flavour out. They charred the wood simply to leave a miscellaneous mixture of extractive matters in the charcoal so that the whiskey can take it out. The object of that is a different story altogether. This is charcoal that when you have heated it to a red heat, as I have used it, gives out nothing, but you cannot heat a cask and char it to that extent. You get matter that the whiskey can dissolve out of the charcoal.

10980. (*Dr. Bradford.*) Have you, in the course of your experience, come across the practice of adding shavings in order to mature whiskey?—I have heard of it, but I have not seen it practiced.

10981. We have been told that by some witnesses, but you have no actual knowledge of it?—I have no actual knowledge of it. The use of shavings and trickling alcohol over it is a very old process for the production of acetic acid, but I never knew of it being used to assist in the ageing of whiskey.

10982. (*Chairman.*) The Commissioners are much obliged to you for the great trouble you have taken in bringing these matters before them.

The witness withdrew.

Sir R. D. Powell.

Sir Richard Douglas Powell, called.

10983. (*Dr. Bradford.*) You are the President of the College of Physicians?—Yes.

10984. You have been physician to more than one London hospital?—Yes.

10985. Would you tell the Commission what hospitals you have been physician to?—I have been physician to the Middlesex Hospital, to the Brompton Hospital for Consumption, and I have been connected with other institutions.

10986. At the present time you are consulting physician to those hospitals?—Yes.

10987. You have had a large experience, of course, in the treatment of disease in the course of your hospital and private practice?—Yes.

10988. Would you kindly tell the Commission what stimulants are most usually ordered in the treatment of acute disease?—I should say spirit in some form, brandy and whiskey, and more rarely other spirits, and, of course, occasionally wines, such as champagne and port.

10989. We will confine ourselves to spirits. In your opinion which of these spirits is the more largely used?—Brandy unquestionably is much more largely used.

10990. You state in your *précis* that at one of the hospitals to which you are attached it is used at least ten times more than whiskey?—Yes, I was quoting the Middlesex Hospital; and the same remark would apply to the Brompton Hospital.

10991. It was used there ten times more?—Yes, about that.

10992. Have you noticed any change in the last twenty years with regard to the relative proportion of whiskey used?—I do not think there has been much change. I have not observed much change myself. I think more whiskey is used as a beverage now than brandy. I should say a good deal more of late years.

10993. Medicinally it might be described as being used as a stimulant and for dietetic purposes, might it not?—Yes.

10994. You think that from a dietetic standpoint there has been a considerable increase?—I should think so.

10995. But not in the routine treatment of disease for stimulant purposes?—No.

10996. Can you give the Commission any evidence as regards the kind of whiskey that physicians are in the habit of using in the treatment of disease?—I cannot say from my own experience that I have practically noticed any difference. I have only insisted that the whiskey should be fairly good. I have not specified any kind of whiskey, and I should not be able to judge as to the relative merits of particular kinds of whiskey.

10997. You have relied mainly on the purveyors of the whiskey?—On the fact of its being a good whiskey of a fair age.

10998. You would lay great stress on the age of the whiskey?—I would lay great stress upon that.

10999. But you do not think it has been a common practice amongst physicians to lay stress on whether it is a pot still or a patent still product?—I should think generally physicians do not know the difference between the two.

11000. Do you think they are aware that the bulk of the whiskey, or that a very large amount of the whiskey that is in the market, is what is known as a blend?—That, certainly, is one's general impression.

11001. You think they have that knowledge.—Yes.

11002. Can you assist us in any way with regard to the reputed ill-effects of new and raw spirit in the production of disease? It has been stated by some witnesses that it is a well-known thing that new and raw spirit causes very serious effects?—I should not have the slightest doubt myself that the raw spirits, recent spirits, which are drunk in the drink shops are responsible for a good deal of the bad effects of alcohol in producing mental disturbance. That would be my decided impression, but I have not analysed the spirits in the cases concerned, and therefore I can only speak from a general physician's point of view.

11003. Would you be inclined to say that it was definitely proved that mental disturbance was associated especially with the consumption of new and raw spirits?—I am quite convinced of it in my own mind, but I could not quote any authoritative evidence for it.

11004. Of course, quantity would play a considerable part in it?—Yes, but I should think that the adventitious product which is not matured would makes a great difference in the effects of alcohol.

11005. From a medicinal point of view would you lay stress on the flavour of whiskey? Do you think flavour is an important element in its use in the treatment of disease and for dietetic purposes?—I should attach some importance to what I may call the blended products, the extra products of alcohol upon which I gather the flavour depends. I should attach some importance to them, but of course the main fact is that the patient is taking alcohol of a certain strength.

11006. The main value of the substance depends on the amount of alcohol that is present rather than on the bye-products?—I should say so.

11007. Do you think the question of flavour would be likely to influence the amount of whiskey consumed dietetically? It has been suggested to us, for example, that the patent still spirit with a little flavour is less satisfying and more likely to cause thirst and thus likely to lead to increased consumption. Is that probable?—I should have thought, speaking as a man of the world, that a good flavoured whiskey would be more largely consumed than a whiskey without any flavour.

11008. It has been suggested that the more highly flavoured whiskey stands a greater dilution?—I should think that may be so.

11009. (*Dr. Cushny.*) With regard to the age question, it is merely a general impression that you have that the newer whiskies have this dangerous or bad effect?—It is my impression, and it is founded on the fact that in the newer whiskies there are products which are not properly oxidised—the amyl ethers instead of the ethyl alcohols.

11010. Of course, it is a very general impression among the public, and I did not know whether you simply shared that or whether you had really made definite observations upon it?—I have never gone into the question chemically myself, I am not competent to do that, but that is my very decided impression, that the object of maturing alcohol is to oxidise the bye-products to a certain extent—those which are injurious, such as fusel oil, and so on.

11011. The question might be put whether it is not simply to improve the flavour?—I do not think that is the main point at all. I have no doubt it does improve the flavour, but I think it makes the whiskey more wholesome. In prescribing whiskey I would specify that the whiskey should be of a certain age.

11012. (*Dr. Adeney.*) We have been told that when toddy drinking was customary whiskies were not aged, but they were all young whiskies at that time?—Yes.

11013. Do you know of that yourself?—I do not know. I never was in the habit of taking toddy, so I could not say. I should have doubted that very much myself.

11014. I was wondering whether the present value that is attached to old spirits existed years ago?—I should have thought that the toddies of old times were the purer Highland pot still whiskies. Patent still whiskies did not exist in those days, did they?

11015. I think they must have done, but we were told that at that time whiskey was not aged to anything like the extent that it is now. But you know nothing about that?—No, I know nothing about that.

11016. (*Dr. G. S. Buchanan.*) You told us that you did not think the medical practitioner knew much about the difference between pot still whiskey and patent still whiskey?—I should think not.

11017. But for example, in your case would you generally have an impression as to what were the essential constituents of whiskey apart from the alcohol?—I believe it contains a certain amount of additional ethers, a certain amount of amylic ether and other bye-products.

11018. You tell us in your *précis* that you personally had always thought of whiskey as a spirit distilled from malt, and that you believed that most whiskies, except those of the highest class, are blends of patent still spirit deriving flavour and aroma from the more genuine pot still product?—Yes, I should think that all the cheaper whiskies which would be mainly used in hospitals and by the large proportion of the ordinary public would be probably pure spirits blended with the flavour of pot still whiskey. I think good pot still whiskey is too expensive for general use.

11019. But so far as a medical man is acquainted with the question at all, he would share your impression that the characteristic flavours were derived from malt distillation?—Yes.

11020. And from pot stills?—Yes.

11021. We have had some evidence with regard to the advantage of having a comparatively neutral and flavourless whiskey from the patent still, that it is purer as regards freedom from possibly deleterious products, and apparently medical opinion is sometimes asked upon that point. Would you not think that it would be useful to enable medical opinion to be given on that matter that the spirits should be distinguished, that in fact it should be possible to know whether a whiskey is a grain whiskey, or is a blend, or is a malt whiskey?—It might be useful as a trade point, I should think, but if the whiskey is a pure spirit and the stuff it is blended with is a genuine and mature material, then it is whiskey all the same and it does not make much difference. I should like to draw attention to some very interesting experiments which were reported before the Royal College of Physicians by Dr. Rivers some little time ago. Some of his experiments and some experiments of others have shown that it made a good deal of difference in the apparent effects of whiskey whether it contained the flavours of the pot still —I presume the special flavoured whiskey—or whether it was a purer spirit; that if the man experimented upon with ergograph recognised the flavour of the whiskey it had a more pronounced effect upon him than if he was merely taking the same amount of spirit.

11022-23. (*Chairman.*) The pot still was stronger in effect?—It would have a more apparent effect.

11024. (*Dr. Bradford.*) That was one of my objects in asking the question whether the flavour did not influence the choice in the treatment of disease?—It has a mental effect. I think that was definitely proved by Dr. Rivers' observations and those people he quoted.

11025. (*Chairman.*) The Commission are much obliged to you for the evidence you have given.

The witness withdrew.

Dr. Robert Hutchison, called.

11026. (*Chairman.*) Are you a Fellow of the Royal College of Physicians?—Yes.

11027. Are you physician to the London Hospital?—I am.

11028. You have also studied and written on the subject of food and the principles of dietetics?—Yes.

11029. Have you had to consider in your professional practice and as a scientist the effect of whiskey and the constitution of whiskey?—Yes.

11030. What should you say in your view that whiskey is composed of? What are the ingredients?—It is convenient, I think, from a dietetic point of view to regard it simply as a mixture of water and alcohol and certain other things which one can class together as bye-products.

11031. Water, alcohol and certain bye-products?—Yes.

11032. I suppose water would not have much effect. Is it to the alcohol that the principal effect of whiskey

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is traced?—Yes, there is no doubt about that—practically entirely.

11033. In what position should you place the bye-products in relation to alcohol with regard to the effect?—I should say that the effect of the bye-products is almost negligible.

11034. (*Dr. G. S. Buchanan.*) The toxic effects?—The toxic effects. Relatively they are more toxic, but they are present in such extremely small amounts as compared with ordinary alcohol that they can be almost neglected, I think.

11035. (*Chairman.*) Are these bye-products of which you speak more abundant in malt whiskey than in grain whiskey?—Yes.

11036. And being more abundant, does time have a greater effect on them in the malt whiskey than in the grain whiskey?—It would need a longer time, I suppose, for them to mature in a malt whiskey, simply because there are more of them.

11037. It would be advantageous for malt whiskey to give more time for its maturation than in the case of patent still whiskey?—Unquestionably.

11038. That means that a younger malt whiskey is more likely to be injurious than the grain spirit?—Yes.

11039. From a medicinal point of view the value of the whiskey must be in its alcohol?—Yes.

11040. Do the bye-products of an old malt whiskey produce any beneficial result at all?—Some people believe so, but personally I do not think there is any strong evidence in support of that view.

11041. You do not think so?—No, personally I do not think the bye-products of whiskey possess any medicinal properties.

11042. I suppose you have knowledge of the extent to which whiskey is now used as a medical assistant?—Oh yes.

11043. Is it at all ousting the use of brandy?—I think it is, but that is due to many reasons. It is due partly to the difficulty of getting a really good brandy, and it is due partly also to the great expense of a really good brandy.

11044. When you say "really good" you mean that it must be for a medical purpose pure?—Yes.

11045. Is it your view that you do, as whiskey is now manufactured in Scotland and Ireland, get a pure spirit in whiskey?—Yes, you can get it much more easily than you can in brandy for a given sum.

11046. Its source is nearer, and we know more where it comes from than foreign brandy?—Partly, I suppose, that is the meaning of it. I should say that there is still a great deal more brandy prescribed for medicinal purposes than there is whiskey.

11047. Considerably more?—Yes. I should say at my own hospital there was a distinct movement in favour of ordering whiskey instead of brandy.

11048. Is it as beneficial to the patients for dietetic purposes? Is it as acceptable?—I do not believe myself it is as beneficial as a really good old brandy, but in hospitals you cannot buy a really good old brandy, it is too expensive, and therefore there is a tendency to use whiskey in preference to using brandy.

11049. I suppose in the case of persons in extreme old age being kept alive almost by stimulants, brandy is still the best if you can get good brandy?—No doubt it is better than anything else.

11050. Can you assist us at all in drawing any definition between the pot still pure malt whiskey and the grain whiskey?—I do not quite follow.

11051. The pot still whiskey is the old form of process, and in that process pure malt is very largely used. The patent still is a different process, and grain other than malt is used to a much greater extent than in the pot still whiskey. Has that difference been called to your attention?—Oh yes.

11052. What is your view on those points of process and material?—Speaking purely from a dietetic and medicinal point of view, I do not think the definition between the two processes matters. If it be true what one believes that the bye-product is unimportant as regards its effect on the body, then it does not really matter how the spirit is produced. If it is the alcohol that produces the effect, then it does not matter whether it is produced by the patent still or by the pot still.

11053. In the pot still it is not only the process as compared with the patent still, but the use of malt. Do you draw any distinction between malt and grain other than malted barley?—No.

11054. Is it your view that if you had a patient under your care it would be no matter to you whether it was pot still or patent still which you ordered him?—None at all, but I should like to be sure that the whiskey was matured.

11055. In the first place you would like to know whether it came from a source where you would be pretty sure to get pure whiskey?—Yes.

11056. Then also you would like to know the bye-products, would you not, and also that the whiskey being mellowed would be better than if it were new?—Yes.

11057. Apart from those considerations you have mentioned, you do not care whether it is pot or patent still?—No.

11058. Do you think from what you have heard and know of the purity of the whiskey now that any restriction that could be placed upon the manufacture and materials would be of any service?—I do not think there is any need of any restriction from the point of view of the health of the community.

11059. Would you like to have any stipulation made by legislation that the whiskey should be of a certain age?—I think that would be an advantage.

11060. Have you sufficient skill and knowledge to say what age you think should be put as a limit?—I would rather leave that to the trade.

11061. Do you see any advantage in having any labels or marks put on the bottles out of which the whiskey is sold to the consumer?—Yes, I think it is right a man should know what he is getting.

11062. To what extent would you go in that respect?—If you distinguish between pure malt and a grain and a blend it would be sufficient.

11063. And, I suppose, you would like to be told whether it was Scotch or Irish?—I do not think that matters so much as long as you know the source.

11064. Would you think the consumer, at any rate in England, knows much difference between pot or patent still, or malt or grain?—I think he knows what he likes, but he does not know why he likes it.

11065. He knows what he likes when he tastes it, but he may not know what it is when he asks for it?—He would soon find out that the thing that was labelled "Blend" was the thing that he liked and which suited him.

11066. Why should there be this differentiation in effect as regards whiskey other than any other production? You do not do this as regards wine?—You label the vineyard that it comes from in the case of a claret.

11067. We do not insist upon that; that is only for convenience. Here you get Cambus marked by the trade, but we do not ask that wine should be labelled by any particular vintage?—But the man who buys it does.

11068. We are on the question of legislation. Freedom of trade and finding the public demands it is one thing, but whether the Legislature in its wisdom should say "We think the public ought to know" is another thing?—There are a certain number of medical men who believe that pure malt whiskey is better, and there are a certain number of medical men who believe that a blend is better, and I think they ought to be able to order one or the other and be sure of getting it.

11069. You can get it by going to a trader who will give you what he is asked for, but could you apply anything like this rule you are suggesting to brandies, for instance?—I do not know.

11070. (*Dr. Horace T. Brown.*) You have mentioned that you consider that the influence of the bye-products is practically insignificant?—Yes, in their medicinal effect.

11071. I do not quite understand your position with regard to the ageing of spirits if that be the case?—I can see there is an apparent inconsistency, and I only insist on ageing because there is such a strong

general belief amongst medical men that a young spirit is more injurious than an old one.

11072. Is not that more an article of faith than anything else?—I agree that the evidence for it is not really very strong.

11073. Is there any evidence?—You can simply say it is a general impression which I suppose is derived from the professional experience as a whole. I could not give chapter and verse for it.

11074. Do you think there is any better evidence for it than there is that the sun puts the fire out?—I do not know.

11075. That is the popular belief, of course?—Yes, but still these popular beliefs about articles of diet often have something at the back of them. I believe myself that the injurious effect of a young spirit, if any, is on the digestive organs, and that it produces a condition which some people describe as biliousness. I do not think it affects the nervous system.

11076. The Commission is earnestly seeking for evidence as to the effect of new spirits, and I hoped you would have something definite to bring forward?—I have nothing definite.

11077. (*Dr. G. S. Buchanan.*) It would be a very difficult matter to get evidence on that point, would it not?—Very difficult.

11078. To get conditions of population, one population taking new spirits and another taking old, and comparing them?—It would have to be done on a very large scale to make the evidence worth anything.

11079. It is a thing that can hardly be settled by individual experiments on two or three people, however carefully they were conducted?—Quite so.

11080. Have you any views on the after headache that you said would come from bad spirits, apart from the question of the amount of alcohol taken?—I think I have always been in the habit of regarding that as due to the bye-products.

11081. It is a common experience, when a man takes some form of alcoholic drink, even in quite small amounts, that he is not used to, or at some unusual time. For instance, a man taking a glass of champagne for lunch when he does not ordinarily have it gets headache, and other disturbances afterwards, which can hardly be accounted for merely by the amount of alcohol taken. In that case that probably would be the bye-products?—Yes, the bye-products.

11082. As to the advantage of describing whiskey in broad classes, we have had it represented to us that the more fully flavoured whiskey, like an all malt and pot still whiskey, is an economical whiskey, and more satisfying in that it will stand greater dilution with water or soda water and yet make a pleasant beverage. Might not that be an advantage to the medical man who wished to let a patient have whiskey in a small amount, a small quantity of alcohol, but at the same time to let him have the feeling that he had had some whiskey?—I would not trust to that method of tricking a man into taking a little less alcohol than he otherwise would. I do not think that would be any practical advantage. I should like to know whether a spirit is malt or not, because I have a strong impression that many persons leading sedentary lives cannot stand the pure malt whiskey. I know that from my own personal experience. I could not drink habitually pure malt whiskey. I have tried it, and it does produce in me that condition that is described as biliousness, whereas a well-matured blend or a patent still whiskey does not have that effect. That may be simply a personal peculiarity.

11083. You were asked about the case of separate differentiations for brandy. Do you think it would be an advantage to distinguish between brandy that was derived from the distillation of the juice of the grape and brandy which was to a large extent neutral spirit?—I think it is an advantage, because if one pays for genuine brandy one has a right to get it, but I am not at all sure it is such an advantage from the point of view of health, because I am not satisfied that these inferior or so-called "faked" brandies are so injurious to health really.

11084. I rather gathered that you consider a really good old brandy is more important than another form of brandy in the treatment of disease?—Yes, when you are talking of brandy as a medicine then I do believe the ethers in a well-matured brandy are useful.

11085-6. Is it not conceivable that the same thing might apply to whiskey?—It is. Some medical men believe it is so. Personally I am not sure it is true of whiskey.

11087. But you think it is true of brandy?—I think so.

11088. That is a point I notice in your book on "Food and the Principles of Dietetics" you lay considerable stress upon?—Yes, on the effects of the ethers.

11089. You say "In a case presenting signs of profound nervous and cardiac prostration the best liqueur brandy should alone be employed, no matter how much one has to pay for it. There can be no doubt that its free and timely administration has saved many lives"?—Yes, I think that is true, but one is speaking of whiskey as a medicine and not as an article of diet.

11090. I think in this book and elsewhere you have advocated that there should be information given to the public in connection with articles of food that would give them some indication of what value they are getting for their money?—Yes. The medical profession can never make up its mind as to whether a pure malt spirit or a pure grain spirit is better unless they know what it is the patient is getting.

11091. It is just the same as in the case of many patent foods. We want first of all to know what is in them?—Yes.

11092. (*Dr. Adeney.*) May we take it that although there is no positive evidence in support of the value of aged spirits, whiskey or brandy, still you think there is considerable value derived from human experience?—Yes, I think that is the fair way to put it.

11093. And that entirely depends on the secondary products mixed with the alcohol?—Oh, yes; there is no doubt about that.

11094. So that by inference the younger spirit is to be avoided and the old spirit is to be sought, both for dietetic purposes and for medicinal use?—Yes, for both.

11095. So that although little or no direct evidence is known in support of the popular idea that aged spirits are preferable for general use both in dietetical and medicinal use, still you would suggest there is a value in aged spirits?—Yes, for habitual use I should still say I would sooner use them old.

11096. That is the general professional belief and experience?—Yes.

11097. (*Mr. J. Y. Buchanan.*) There is one question that has been suggested by what you said with regard to the bye-products, or rather that in prescribing whiskey or brandy, it is the alcohol that produces the effect, whatever it is, that you desire, and that the bye-products are in so small a quantity that they do not produce any effect. Most people when they take whiskey take it diluted down to a certain moderate strength which is something like wine. Do you, in prescribing wine, attach as little importance to the bye-products, or is it only the alcohol?—No; wines are in quite a different category. The acids in wine are very important. The amount of acid in whiskey is negligible.

11098. The dilution of the spirit when the patient takes it does not bring it down to much the same?—No, it still remains different to wine, because you have sugar and ether and acids, and all kinds of things in wine, which you do not have in spirits.

11099. (*Dr. Cushny.*) You regard the alcohol as by far the most important part in the medicinal use of whiskey, and the bye-products as of comparatively trifling importance?—Yes.

11100. Do you think that pure alcohol itself can be used instead of whiskey?—I believe you would get the same effects from it, but the patient would not like it, and you have to take that into consideration when a man is ill.

11101. You want the bye-products to flavour?—Yes, some people do administer pure rectified spirit flavoured.

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11102. Do you think they get as good results?—They say they do.

11103. Would you prefer this pure alcohol to a young malt whiskey? Do you think the bye-products are actually injurious in the case of a young malt whiskey?—I believe they are—not to the brain so much, but I think they are irritant to the digestive organs.

11104. (*Dr. Bradford.*) In your practice at the London Hospital you have patients who come from very poor districts?—Yes.

11105. And I suppose there would be a considerable amount of cheap whiskey sold in those districts?—There probably is in Whitechapel.

11106. You have not in the course of your experience there found that the incidence of alcoholic diseases are different to that of the experience of other physicians?—No, I do not think so.

11107. You cannot correlate any alcoholic diseases with cheap whiskey or with raw spirits?—Not the least.

11108. You are quite satisfied about that?—I am quite satisfied about that. I think the popular impression to that effect is wrong.

11109. Not even diseases of the alimentary canal?—No.

11110. (*Dr. G. S. Buchanan.*) Would you be in a position really to know if there was any characteristic disease to be associated with the raw spirits sold at cheap public-houses in Whitechapel?—You would see if it produced a special type of alcoholism, a type in which the brain was particularly affected.

11111. If it were on a large scale and you had a great number of patients it might be possible, but in the absence of something very striking which would show in large numbers of cases, would you be likely to make anything of it?—We do see a great number of patients and a great number of alcoholists, and we do not recognise any special type of alcoholism we can attribute to the quality of the drink sold in the neighbourhood.

11112-13. But in our experience with arsenic in beer arsenical neuritis had been going on for many years before the arsenic epidemic. The matter was brought to a head by the occurrence of an epidemic on a very large scale, and it was only then discovered what the neuritis was due to?—It was discovered.

11114. After it had killed several hundred people in a few months?—I should have thought it was discovered by the acumen of one particular physician.

11115. The first thing was to provide the physician with material?—We have abundant opportunity for getting material in Whitechapel, and we have acumen enough to have discovered if there was any particular kind of alcoholism which was produced there.

11116. Do you think if you had been in Manchester for years before the arsenical epidemic, and you had only been dealing with the small amount of arsenical neuritis that was present in those days that you would have been able to find out that characteristic of Manchester beer?—I do not know that that is quite a fair question. I do not suppose I should, as so many other people did not.

The witness withdrew.

(Adjourned for a short time.)

Prof. W. E. Dixon

Professor Walter Ernest Dixon, called.

11117. (*Dr. Cushny.*) You are Professor of Pharmacology and Materia Medica at King's College, London, and Assistant to the Downing Professor of Medicine, Cambridge?—Yes.

11118. You wish to give evidence with regard to the change which has come about in the manufacture of whiskey?—Yes.

11119. And the bearing that that has on public health?—Yes. Of course, it is generally known that whiskey has replaced to a large extent beer and wine in this country. That is the first point. Then, secondly, the manufacture of whiskey has altered during the last 20 years. Whereas 20 years ago 70 per cent. of it was prepared from malt and distilled in a certain way and 30 per cent. was patent still spirit, now practically the reverse has come to pass. I would also like to state that this change has not been appreciated by the medical profession, who originally prescribed it, I believe, as a less gouty form of drink than wine or beer. It was Sir William Roberts who recommended it originally as a less gouty form of drink. I think it is important to understand at once whether this alteration in the manufacture of whiskey has produced any detrimental action on the public health. I have got some figures here which I could give you, but I think you have already had a lot of evidence to show that the cheaper you prepare a whiskey the fewer bye-products it contains, and either less alcohol or the same percentage of alcohol, so that, from the point of view of toxicity, cheap spirit—that is, a spirit that is prepared in a cheap way—is, generally speaking, less toxic and certainly not more toxic than a more expensive sort prepared from malt distilled in a pot still.

11120. Do you think that the same amount would contain the same amount of alcohol but without the bye-products?—The bye-products are very much less.

11121. Do you think the bye-products are a toxic constituent?—No; but I do think that a whiskey containing 50 per cent. alcohol is more toxic than 50 per cent. of alcohol.

11122. Is that founded on experiments, or is that an impression?—No, that is founded on experiments. I think it was done by Abel, and I think it is stated definitely in Cushny's Book on Pharmacology.

11123. I thought, perhaps, you had done some experiments yourself?—In that connection I should like to mention two types of experiments that I did myself, but which are not of very great importance. The first was to determine if it is possible to distinguish different whiskies when they are uncoloured—patent still whiskies and pot still whiskies. I had about a dozen of these diluted in the laboratory, and I got all the men who came in to taste them. I may say that the pot still whiskies, of course, they were always able to distinguish, and one sample of patent still whiskey distilled in Ireland was always readily distinguished, but as to the others it was very difficult. The percentage of error as to whether it was alcohol or whether it was whiskey was practically 100. To verify that experiment I made some artificial whiskey at home. I got a 50 per cent. solution of alcohol, and added a glass of sherry to the bottle, and then coloured it with a little burnt sugar. When my friends came in I offered them whiskey in the ordinary way, and none of them made any remark about it; it had the ordinary taste and effect of whiskey; in fact, it was whiskey as we ordinarily understand whiskey. So that the real question from those experiments is, I think, is there any difference in taking this whiskey which is mainly alcohol, and the genuine whiskey which is alcohol with a considerable proportion of bye-products? I think at once there is this essential difference—it is derived from experiment—that a whiskey that contains a considerable percentage of bye-products produces a feeling of warmth and comfort in the stomach which alcohol alone, taken properly diluted, does not produce, that is to say, it produces a greater feeling of satisfaction which I put down entirely, and of course it must be due, to these other substances which you do not get with alcohol.

11124. You wanted to bring up some points as to the action of whiskey, first of all, with regard to the taste?—I should like to say that I think there is a distinct difference in action between whiskey and spirit. In giving evidence of that I should like to say, in the first place, that I am perfectly well aware of the very minute quantities of these bye-products,

and of the criticism that may be made that there is such a small proportion of them that it is impossible that they can produce any effect. I think it is extremely likely that they can produce an effect, and I should like to give two analogies, if I might. One is that chloroform at the present time is prepared in two ways, one from acetone, and the other from alcohol. The acetone chloroform, although it is $CHCl_3$, produces an irritant action, and that irritant effect does not occur with the chloroform prepared from alcohol, and it has been further shown that this is due to about ·1 per cent. of ethyl chloride present in chloroform prepared from alcohol. So that quite small quantities of these drugs can produce an effect. The whole theory of mineral waters in which drugs occur in minute quantities means that small quantities of drugs taken over a long period do produce an action. The evidence I wanted to give first of all was with regard to differences in action on the digestion by saliva. These are not my own experiments, although I have verified some of them. I should like to refer especially to the work of Chittenden, who is a well recognised American authority. One experiment of Chittenden's I should like to mention in which he used a whiskey residue and tested the effect of the whiskey residue on the digestion by saliva *in vitro*. His result was that when there was no whiskey residue present the relative amount of digestion would be put down at 100, and if there was 5 per cent. the digestion was 126, and if there was 10 per cent. the digestion was 124, and if there was 15 per cent. the digestion was 113. So that as far as these results go they indicate that the solid matter present in the whiskey had some stimulating action on a salivary digestion. I have done a few experiments of that kind, and there is no question that the residue from whiskey does increase the digestion of starch, whereas the residue from sherry and certain wines has exactly the opposite effect, and greatly retards the digestion. Then there was one other point I should like to mention in connection with salivary digestion, and that is that a whiskey with a strong flavour, a very aromatic flavour, produces a considerably greater flow of saliva than spirit. Merely holding the whiskey in the mouth produces a considerable flow of saliva; and if you hold an alcohol of the same strength in the mouth you do not get that flow of saliva. I do not wish to make out that those are points of any very great importance, but I point out that there is a little difference between the two.

11125. This residue you use is non-volatile—it is added to the whiskey?—Yes, it is the whiskey evaporated to dryness.

11126. It is non-volatile, and it has been added to the whiskey since it was distilled?—No.

11126*a*. Yes, if it is non-volatile?—No, not necessarily. There are certain solids which I understand are extracted from the cask while the whiskey is being kept.

11127. It may be extracted from the cask while the whiskey is being kept, or it may be added first?—Yes, precisely.

11128. They very often add colouring matter, for example?—Yes.

11129. You were giving some evidence with regard to the effects on the circulation?—Yes, and the respiration. I think the respiration is most important because there are really definite results with the respiration. There are definite results obtained by a great number of workers, and they all come to the same conclusion. They are not English workers, but nearly all German workers: one American worker, Abel, after writing a very long paper summarising all the work that has been done, comes to the conclusion that highly flavoured wines and brandy and other alcoholic beverages which contain a large amount of stimulating esters have a more pronounced effect on the respiration, increasing the respiration, than ethyl alcohol. Perhaps I might summarise the whole German work by giving one experiment by one of Binz's pupils, Wendelstadt. He shows that if you have a man who is fatigued, or an animal that has been fatigued by some exhaustive labour or exercise, and if you administer alcohol to them in those conditions you increase the percentage gain in the respiration by 30 per cent., and sometimes 40 per cent., but if you administer the alcohol in the form of cognac—he did not do it with whiskey—or with wines, you increase it to 80, and in some cases to 90 per cent., that is to say, you double the percentage gain or loss in the respiration volume. There is the result of that experiment if I might hand it in to the Commission. (*Same handed to the Commission.*) There are numerous other people who have come to the same conclusion—that wines and spirits of rich bouquet have a more stimulating action on the respiration than alcohol alone. The last point in the physiological action I would like to mention is on the circulation, and it is simply this, that as I mentioned before, whiskey or brandy produces a greater reflex effect than alcohol alone. If you place on an artery the instrument for recording the movements of the pulse and you hold a little ethyl-alcohol, say 30 per cent., in the mouth, that produces quite a considerable effect on the pulse, which is considerably quickened, but the acceleration passes over in two or three minutes. This effect is greatly enhanced if you give something with a high flavour like aromatic whiskey or cognac, or wine with a rich bouquet.

11130. (*Dr. Adeney.*) Were those experiments with spirits of the same alcoholic strength?—Yes, they were with the same alcoholic strength, that is the important point, of course. Besides that acceleration you get a considerable flushing of the face—of the ear—again with that type of substance. Of course, that is useful in practice, because everybody knows in fainting fits, and such like conditions, it is the habitual custom to put neat brandy in the mouth, as one imagines that it acts in that way, exciting the nerve ends and reflexly accelerating the heart.

11131. (*Dr. Cushny.*) Did you hear Dr. Stockman's views on that point yesterday?—Yes, I did.

11132. He scarcely agreed with you with regard to the flushing of the face. I asked him particularly whether there was any difference to be noted, and he said he could not make out any difference between rectified spirit and pot still whiskey?—But surely he was not doing it in the way I am describing. He drank the whiskey. I am not speaking of drinking the whiskey, but I am speaking of simply holding it in the mouth.

11133. We are more concerned perhaps with its effects when it is drunk than when it is held in the mouth. Have you anything to say about the exact action of bye-products? Have any experiments been done?—Except those that I have mentioned there have been no experiments done of the slightest value. That is a point which I think ought to be investigated. All the experiments that have been done on these bye-products have been patchwork, done here and there in order to finish off a piece of work: they have not been done with the idea of determining whether the bye-products in any special spirits or wine have any definite action.

11134. Should a standard be established for potable spirits, and if so, what sort of standard would you suggest?—In the first place I think it is of the greatest importance that one should know what one is buying. At the present time we are all agreed that margarine is an equally good food to butter, that it is quite as pleasant to take, but that in spite of its being just as good in every way as far as we know, if we ask for butter we expect to have what we ask for. So that the principal point is, I think that one should know definitely from the label what one is buying.

11135. What sort of a standard would you suggest? Would you suggest a chemical standard, or how would you standardise?—I have not all the evidence before me, and that is a difficult point for me to answer. Of course, standards might be made that it should be compulsory to prepare whiskey from certain grain. That is the first thing. Then secondly, it might be required to possess certain flavouring properties, or contain a certain percentage of bye-products. I do not propose to suggest that that is so. My main point is that I think one ought to know exactly what one is buying.

11136. You put a very great amount of weight upon the flavour?—Yes, because in the Pharmacopœia there are very many drugs which owe their action entirely to flavour. The whole of bitter substances are used for no other purpose than to produce a bitter taste and produce a profound effect on the stomach and on the appetite, so that I think flavour is of the utmost importance.

11137. Could you give us any information about a series of experiments that were done at Cambridge lately in which whiskey was used by Dr. Rivers?—Dr. Rivers' experiments consisted in measuring the

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amount of work which a certain muscle in the body was capable of doing, that is to say, there was a lever fixed to the middle finger and this was required to contract automatically every third second in this way (*describing*). By that means a weight was raised and the amount of work was accurately estimated. The subject was required to live under fixed diet and according to fixed condition, to take the same amount of exercise and as far as possible everything was done to make the experiment quite consistent. Then the effect of alcohol was tried upon him, and whiskey was tried along with alcohol. My part of the experiment was to try and hide the flavour of the alcohol, and so he had a number of samples of alcohol, the flavour of which was hidden.

11138. (*Mr. Guillemard.*) Was the experimentee a total abstainer?—Yes. In the case of the whiskey, that had to be given up, because the sensory impressions from the taste produced such a profound effect that one could not tell what effect was caused by the alcohol and what was due to the taste. Merely taking some substance that is pleasant to the taste increases the capacity for work, so that the whiskey, from the point of view of these particular experiments, was a failure; it did not answer the purpose, and had to be given up.

11139. (*Dr. Cushny.*) You could not make any use of it?—The experiments were not done with the object of trying whiskey; whiskey was not the object of the experiments. We administered the alcohol in a pleasant way, as we imagined, as opposed to the objectionable way in which it was being taken before, and it did very considerably increase the amount of work, but that was not due to the bye-products, but was only due to taking a less nauseating substance to the taste than was previously used.

11140. (*Dr. G. S. Buchanan.*) I should like to ask, for my own information, whether that difference that you have told us about between chloroforms prepared from alcohol or acetone is generally recognised?—I think that is recognised at the present time. The work was done by Rowell, Senior Anæsthetist at Guy's Hospital, and Wade, the chemist. As soon as they mixed a percentage of ethyl chloride with the chloroform prepared from acetone it lost its irritating properties, and became like the chloroform prepared from alcohol.

11141. (*Dr. Cushny.*) I think that irritating effect of pure chloroform has not been noted in other methods of manufacture, has it?—Are there any other methods of manufacture?

11142. Yes, chloral-chloroform and salicyl-chloroform. There are those two?—I do not know about those two, but here is Wade's original paper. I thought the only two common ways were those two I have mentioned.

11143. No, you can get salicyl-chloroform and chloral-chloroform?—Is that practically cheap?

11144. I do not know about the price, but they have been used.

11145. (*Dr. G. S. Buchanan.*) You think those are the two ordinary varieties?—Yes, the only two I am acquainted with.

11146. I did not quite understand in the experiments you told us of regarding the residue of whiskies and their action on salivary digestion and on the flow of saliva, whether the amount of residue used in those experiments was at all comparable to what would be obtained from whiskey under ordinary conditions or was very much larger?—No, very much larger and not comparable at all. I only gave them to show there was a difference.

11147. The same effect would be obtained?—Yes, of no practical significance.

11148. With regard to the effect on respiration of alcohol and cognac, were the experiments done actually with the spirits themselves?—Yes.

11149. That was not a question of residue?—No, that was a question of taking the actual spirit.

11150. Some of the experiments that you have just spoken of were intended to supply some physiological equivalent of the sense of well-being that you have spoken of?—Yes.

11151. You told us you thought that the exact action of the bye-products and residues on a living body was a thing that might with advantage be gone into experimentally?—Certainly.

11152. If it were so it might be an advantage to the inquiry on which we are engaged if you could give any sort of indication as to the lines of work that might be followed in a matter of that kind. What occurs to me is that, after all, those attempts to measure physiologically would be in any case so imperfect that they would be unlikely to give one sufficient results?—Of course, the methods that have been adopted up to now have been crude ones, such as taking the blood pressure in a man. One does not expect to get any result from such an experiment as that, I think. Alcohol itself produces no effect. The methods that would be adopted would require very careful thinking out, and I should be prepared to suggest them after thinking them over. To suggest casually experiments would be a little troublesome, but I am perfectly sure a series of experiments to determine the action of those substances in the amounts in which they are present in whiskey is quite feasible.

11153. (*Dr. Adeney.*) Do you mean separately?—No, together I should suggest.

11154. Mixed with the alcohol?—Yes, the qualitative difference is really what is required, I suppose.

11155. (*Dr. G. S. Buchanan.*) If you were doing those experiments on the human subject in that way, would it be important to take as a subject of experiment a man who was used to alcohol in some form or other?—I think it would be much more important to take people who were not used to it.

11156. Do you think a man who is not used to alcohol would be affected differently by different varieties of spirit from a man who was used to alcohol?—Yes.

11157. It is the ordinary experience of a man who does not take alcohol, I should think, that one whiskey to him would be equally as unpleasant as another?—Precisely.

11158. You would want those conditions?—Yes, I think so.

11159. If you have time would you put together some ideas that occur to you as to the lines of investigation that could be followed?—I should be pleased to.

11160. They would be of value to this Commission, but whether we could follow them would be a different matter?—It is most important, I think, that the Commission should have its own definite evidence of any differences which there may be between different whiskies, although such differences, we are all perfectly clear, are relatively insignificant. I only wish to point out that there are differences, but they are insignificant ones.

(*Chairman.*) We are much obliged to you for your evidence.

The witness withdrew.

(*Chairman.*) This statement the Commissioners wish to make, and it would be an advantage if it is made public: The Commissioners have now examined all the witnesses who have been suggested as able to give useful evidence upon the principal subjects that have been up to this time considered by the Commission. It may be taken therefore that the evidence upon these subjects is substantially concluded; but if any application be made to examine witnesses it shall be fully considered. It must not be understood that the labours of the Commission are at all drawing to a close, but we are dealing with subjects one after another in detail, and what I have said refers to the matters that we have considered.

(Adjourned to Monday, June 22nd, at 12 o'clock.)

TWENTY-FIRST DAY,

Monday, 22nd June, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*)

Mr. PATRICK ALOYSIUS MEEHAN, M.P., called.

Mr. P. A. Meehan.

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11161. (*Chairman.*) I believe you are member for the Leix Division, Queen's County?—Yes.

11162. And were chairman of the Queen's County Council for nine years?—Yes.

11163. Have you carried on business as a wine and spirit merchant for 35 years?—Yes.

11164. Have you been many years a member of the Committee of the All Ireland Traders' Association?—That is so.

11165. You have had a practical knowledge of the business?—Yes.

11166. I believe you have some licensed houses belonging to you?—I have six licensed houses in different parts of the county, and I have had control of them for about the period I have stated in the *précis* of my evidence.

11167. I suppose in this way you have obtained a practical knowledge of the Irish whiskey trade?—I have knowledge of the whiskey trade from having to buy whiskey and in dealing with it for such a very lengthy time.

11168. I need hardly ask you whether your trade is in Irish whiskey?—It is. I sell as well as Irish whiskey a small quantity of Scotch whiskey. Some of my customers ask for Scotch whiskey, and I procure it, of course, but it is quite a small quantity.

11169. Do you import it from Scotland, or is it manufactured in Ireland?—The only Scotch whiskey I have ever bought I bought through a Dublin wholesale merchant.

11170. When you say your customers ask you for Scotch whiskey I suppose that means from time to time?—Yes.

11171. Where do you obtain that from to satisfy that demand?—I get the small quantity of Scotch whiskey I sell through a Dublin wholesale merchant.

11172. I suppose you do not know its history?—I take it on good faith, and the character of the merchant from whom I buy.

11173. You ask for Scotch whiskey, and they sell you that?—Yes.

11174. You would not know whether it had been made in Ireland out of Scotch barley by the Scotch process, or whether it had been made in Scotland?—The characteristics of Scotch whiskey are different from the characteristics of Irish whiskey, and I would be able to distinguish that it was not Irish whiskey.

11175. We have had some evidence as to the fact that what is called Scotch whiskey may be made of Scotch materials in Ireland?—I do not think that is the case. I have no knowledge of it.

11176. What is your knowledge of the distinction between pot still whiskey and patent still whiskey?—It is the general belief of the public and the licensed trade in Ireland that Irish whiskey is the product of Irish malt and unmalted barley distilled in a pot still.

11177. You are aware, of course, that of late years a large proportion of whiskey is in the United Kingdom manufactured by the patent process?—Yes, I am aware of that.

11178. What is your idea of the superiority of the pot still product over the patent?—I am hardly in a position to go into the difference of quality or value of patent and pot still. I can only certify to the fact that the general public in Ireland, both the general body of the people and the trade in Ireland, hold that Irish whiskey is the product of Irish materials made in a pot still, and that anything that is not made in a pot still is not Irish whiskey. In my opinion, if the people who drink whiskey thought they were getting patent still whiskey or anything that did not come up to their idea of what Irish whiskey is, they would not take it.

11179. What are your grounds for saying that, in the opinion of the public, to make it Irish whiskey it must be manufactured by the pot still process?—I am stating what is the general opinion of the public.

11180. Could you give the grounds for that opinion? Do you find it in any writing—circulars of the trade, or anything of that kind?—You ask what are the grounds for the people forming that opinion?

11181. Yes. Can you say upon what that opinion is founded, and why it is that that opinion exists that Irish whiskey must be made by the pot still process?—Because the idea is that Irish whiskey was always made in a pot still, or by the pot still process in a pot still from pure ingredients, and the opinion of the people is, whether right or wrong, that patent still whiskey can be made from pure or impure materials.

11182. Is that what you mean? You qualify it by saying "whether right or wrong"?—Yes.

11183. That is the opinion?—Yes.

11184. And is this Irish whiskey, necessarily pot still according to that definition, drunk plain as a simple product, that is unmixed?—Is that in connection with the question of blending?

11185. I was leading up to that. Is any large quantity of it drunk according to your experience and knowledge as unblended spirit?—Large quantities of whiskey. I think the bulk of the whiskey drunk in Ireland is unblended. People now ask for whiskey of certain manufacturers, and they will insist on having that. In other cases there are on sale blended whiskies; some of them are pure and good. If they are the blend of noted Irish manufacturers, I believe they are pure and good. There are other blends which are blends of patent still and pot still. These the people do not consider pure, nor would the buyer consider them pure Irish whiskey.

11186. If your customers took simply a spirit, pot still on the one hand, and patent still on the other, the difference would be so marked that they would know it in a moment?—I do not know that their taste would be so acute.

11187. Do you know from experience if there is any marked difference between the pure pot and patent spirit—is there a stronger or a more pungent flavour?—In my opinion there is.

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11188. Therefore they could say: "I have been accustomed to pot still whiskey, and I want it"?—Yes.

11189. Now as to the blends. You know in Ireland there is a good deal of blended spirit sold?—Yes, I believe there is.

11190. Has that consumption and sale proceeded from the public taste—from a liking for the blended spirit?—I do not think it proceeded from the public taste. I think it proceeded from the desire on the part of the blender and the retailer to make a larger profit.

11191. I do not know whether you have personal knowledge, but what do you say as to the blending of pure pot still and pure patent still, and letting the blender try to find out the right proportion? Do you think the result objectionable or not?—There are some cases where it might not be objectionable. If the blend consists of whiskies of recognised manufacturers of Irish whiskies, a blend in that case might add to the bouquet or the flavour of the whiskey, but if the blend is of a pot still whiskey and a patent still whiskey, the result is considered to be deleterious and not what the people expect to get—not a genuine whiskey.

11192. Is it your view that a blend of pot and patent still under all conditions must be injurious?—I hardly have sufficient knowledge to give an answer in the affirmative without explaining.

11193. Is it your opinion that a blend of pure good pot still whiskey with a certain proportion of patent still must be under all conditions objectionable?—I believe it would.

11194. On what ground?—On this ground: that patent still whiskey is not as pure a product as pot still. There are certain cases in which it may be. If it is distilled from pure ingredients it may be as good. I have not the technical knowledge of distillation to know whether it would be as good, but it is well recognised that patent still whiskey can be made from anything containing alcohol, and is made from anything containing alcohol, in many cases from impure ingredients, that it may be made at a cost of something like 10d. a gallon, while pure pot still whiskey made from pure ingredients costs about 3s. 3d., and a blending of cheap spirit, costing 10d. to produce from impure materials, with a good spirit, is injurious to the one made from pure ingredients.

11195. That is not quite my question. My question assumed that the two spirits—one made from pot, and one made from patent—were equally made from good ingredients. Assuming that there is a blend of pot still whiskey made from sufficiently proper and unadulterated ingredients, and a patent still whiskey made under the like conditions, from proper and unadulterated ingredients, would the blends of those two whiskies be objectionable in any way?—I believe it would.

11196. Now will you tell us why?—Because the blend would be wrong, and as I have stated before, people believe, and the trade believe, that Irish whiskey is the produce of Irish products made in an Irish pot still, and to blend that product with the product of another system of distillation interferes, and in my opinion improperly interferes, with the character of the article which the people recognise as Irish whiskey—the article which they require.

11197. The result is that, according to you, all patent still whiskey is excommunicated. You will have nothing to do with it?—In my opinion if patent still whiskey is put on the market for sale it should be represented as what it is. It should be, in my opinion, described and sold as patent still spirit, and the word whiskey should not be applied to it.

11198. Would you tell me whether you have formed this opinion you have expressed because you think that frequently there are bad ingredients in the patent still whiskey or whether you have formed it on the ground that the process is wrong?—I think I have formed the opinion on both grounds, both that the materials are not good, and that the process of manufacture is not good either.

11199. Would you go to the ingredients first? Is there any reason why if a trader wished to make a greater profit he could not use bad materials in the pot still as well as in the patent still?—I do not think that by any process of manufacture or distillation the nature of bad materials can be altered. I apply the same remark to any article of food, say, butter. Inferior butter may be used, but in the manufacture it loses the nutritious qualities of butter.

11200. Is there any reason for saying that you cannot have bad materials in pot still as well as patent still whiskey? Is there any reason for saying that there is any greater difficulty in using bad materials in pot still than there is in the patent still process?—I daresay it is quite possible that some inferior article is used in pot still.

11201. What is the inferiority, if any, in the patent still process in relation to the pot still?—I have not sufficient knowledge of the process of manufacture to say.

11202. You are giving us this evidence simply as the general result of what you think people think? That is so, is it not?—I am giving you evidence of what the general opinion of the people of Ireland is, as far as I know, from 35 years' experience as to Irish whiskey, and what they regard as Irish whiskey.

11203. Have you knowledge yourself of the patent still distilleries that do exist in Ireland?—I have not.

11204. You do not deal with them, and know nothing of them?—No.

11205. (*Dr. Horace T. Brown.*) Would you go so far as to excommunicate all barley which is not grown in Ireland?—I would not excommunicate any sound materials. I am aware that large quantities of foreign barley are imported into Ireland. I understood it was mainly used in the breweries. I do not know to what extent it may be used in distilleries.

11206. That is what I was coming to. Your distillers do frequently import barley. I understood you to say you would not regard anything as Irish whiskey which was not made from barley and other materials of that kind actually grown in the country?—I have stated generally what is the opinion of the people with regard to the words Irish whiskey, and what they expect to get when they ask for Irish whiskey.

11207. They expect to get a product made from Irish materials, that is, from cereals grown in Ireland?—Yes. I might remark that several times within the last five years protests have been made in many parts of the country against importing foreign corn for the purpose of manufacturing whiskey.

11208. Is your statement quite correct that the Irish public does not know that patent still spirit is used for blending purposes?—I do not think the general public know anything about it.

11209. Is your knowledge confined to your district, Queen's county?—My practical knowledge of it is confined to that district.

11210. You are not conversant with the conditions of trade in the North of Ireland, say?—No, save from statements I heard from time to time that a great portion of spirit sold in some parts of the North of Ireland is patent still, but I am aware at the same time that there are very extensive pot still distilleries in Belfast and genuine Irish whiskey manufactured there.

11211. (*Dr. G. S. Buchanan.*) At your licensed houses you sell whiskey at different prices no doubt?—Yes.

11212. Can you tell me with regard to the cheapest of those whiskies what the price would be?—The cheapest would be 18s. per gallon retail.

11213. That would be 18s. per gallon cost to you?—No. 18s. sold to the public.

11214. Is that entirely pot still whiskey?—I buy it as such from the distiller.

11215. From the actual distillery at which it is made?—Yes. I have never bought patent still whiskey. My people would not buy it from me. That is to say, I have never bought it to my knowledge. I have never bought anything but pot still whiskey direct from the distiller.

11216. What would you say constituted the principal differences between the whiskies that you sell in the matter of price and value?—The whiskey I sell at the price I have quoted is the product of an Irish pot still distillery, made, I believe, as I have described, from Irish barley, and I buy that at three years old. I buy no whiskey under three years old, and I buy it from three years old to seven years old.

11217. I may take it that the cheapest whiskey is the youngest whiskey?—It is—the three years' old whiskey. I sell three, five, and seven-year-old whiskies.

11218. Do I understand that the sense in which you use the word "Blend" is always a blend of pot still whiskies? In your own trade you have blends?—There are sometimes blends of pot still whiskies. Jameson's, Cassidy's and Power's may be blended, and some do it. I am not aware of my own knowledge that it is done; I have heard of it.

11219. You do not yourself make any blends of pot still whiskies or sell blends?—No, I sell each manufacture distinct on its own merits.

11220. You do not sell either a blend of pot still whiskies together or blends of pot and patent still whiskies?—No.

11221. Neither?—No, I do not, but it is quite possible that it might be done.

11222. (*Chairman.*) You do not do that knowingly; that is to say, you do not know of the blending?—No. I buy a whiskey of an age of a certain number of years, say, seven years' old whiskey, and I believe I am getting seven years' old whiskey. I must depend upon the character of the manufacture and the protection and guarantee of the date of bonding.

11223. (*Dr. Adeney.*) What is the retail price of your five-year-old whiskey?—5s. per quart.

11224. I mean duty paid?—Yes.

11225. What do you sell it to your customers at?—At 20s. a gallon

11226. And what is the price of the seven-year-old?—24s.

11227. So that you have 18s., 20s., and 24s.?—Yes.

11228. Do you know from your own personal knowledge anything of the Irish blending trade, by that I mean blending of pot still with patent still?—I do not know anything of my own knowledge. I believe it is done, and I believe it is a wrong on the public to have it done.

11229. Do you know anything of the Scotch blending trade?—I do not.

11230. You have heard a good deal about it, I daresay?—Yes.

11231. You are aware that the Scotch pot still distillers regard blending with patent still to a certain extent as legitimate and sometimes of value?—It is extraordinary what some people consider legitimate.

11232. You know Cork, of course?—I know Cork very well, but I do not know anything about the trade there.

11233. You do not know anything about the distilling trade there?—No, except, I believe, there are some excellent pot still distilleries in County Cork; Allman's, of Bandon, I think is the principal one. I believe there are others.

11234. I take it when you speak of the opinions of the people in Ireland, you refer to the reputation that Irish whiskey has gained from generation to generation in the past?—On that point I do not speak my own opinion. It is the opinion of the people in my county and people generally all over Ireland that I have come in contact with.

11235. Irish whiskey has been produced for so many years past that the people are justified in their belief in Irish whiskey, in your opinion?—I think so, and I think it is wrong to allow anything to interfere with the established character of Irish whiskey. I say whiskey is known and recognised as being a product from Irish materials, and, generally, that it receives a certain purity before it is put on the market. People complain that this new patent spirit is put on the market at a much lower price than genuine Irish whiskey, that it is sold to the public at the same price and as whiskey. Experts say this new spirit causes lunacy. It has a bad effect on the constitution, whereas drinking good Irish whiskey has not produced injurious effects.

11236. That, you think, has been established by long years of practice in moderate drinking?—Yes.

11237. (*Mr. J. Y. Buchanan.*) You said you do not think the Irish people from experience know anything about patent still whiskey?—They may have a hazy idea about it, but their idea about patent still whiskey is not at all favourable to the patent still; and, as I stated, if they knew it was being supplied they would not accept it.

11238. Not knowing anything really about the method, do you give that judgment any great value? If they said they would not have patent still whiskey when by your evidence you say they probably would not know the difference between one and the other, never having heard of it, is that of any value?—It is quite possible that the people get patent still whiskey both in its natural state and blended, but my point is that if people knew they were getting it they would object to having it.

11239. But they could not discover it for themselves from the taste?—Those persons used to drinking Irish whiskey and persons trading in whiskey would know the difference; but a large body of the people would not know.

The witness withdrew.

Mr. William C. Mitchell, called.

Mr. W. C. Mitchell.

11240. (*Dr. Adeney.*) You are managing director of Messrs. Mitchell and Company, of Belfast?—Yes.

11241. You have branches in other towns, have you not?—Yes.

11242. Will you name these towns?—London, Glasgow and Dublin.

11243. How long have you been connected with that firm?—For the past 18 years.

11244. When was the business founded?—In 1871.

11245. You acted as secretary up to the time of your father's death in 1894, I believe?—Yes.

11246. And then became managing director?—Yes.

11247. What kind of business do Messrs. Mitchell and Company do?—We are whiskey blenders, and we also supply brandy, rum, gin and wine.

11248. Are you in any way connected with distilling? Are you distillers?—No.

11249. Is your turnover in whiskey a large one?—Yes, 500,000 gallons a year.

11250. Your business is largely an exporting one?—Yes.

11251. To all parts of the world, as well as to the United Kingdom?—Yes, to all parts of the world.

11252. Have you a large trade in Ireland?—We have a good trade in Ireland.

11253. Is that all over Ireland?—Yes, all over Ireland.

11254. Not particularly in the North of Ireland?—No, not particularly in the North of Ireland.

11255. Is your Irish trade a large trade in proportion to your English trade or Scotch trade?—It is about equal, in proportion to the population, to the English and Scotch trade.

11256. I do not want that, but as a matter of fact is your trade large in Ireland as compared with that in England?—It is much larger in England and Scotland than in Ireland.

11257. You could not describe yourselves as being one of the largest firms supplying Ireland?—No, not in supplying Ireland.

11258. What is your definition of whiskey?—I am not an expert on whiskey, but I understand it is alcohol mixed with water. That is practically all I know about whiskey. I am not a distiller, but I simply know the different kinds of whiskey, patent and pot, and I can tell the difference between the various pot and patent stills.

11259. You say whiskey is a mixture of alcohol and water. Does the difference between pot and patent simply depend on the different proportions of alcohol and water?—No, not necessarily.

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11260. In what does the value of whiskey lie, that is to say, the trade value?—The trade value lies in a mellow and nicely flavoured whiskey.

11261. Does that depend upon the alcohol or upon the water?—I take it partially upon the water.

11262. Let us be quite certain we understand one another. Are you referring to the water used in the process of manufacture, or simply to the water used to dilute the article?—To the water used to dilute the article.

11263. Besides dilution, the water gives a valuable flavour to the article?—No, I should not say that it was a valuable flavour.

11264. What I want you to tell me as a tradesman is wherein you consider lies the value of whiskey for which you get a price in the market?—It depends greatly on the mellowness and flavour of the whiskey.

11265. To what is that due?—It is due to the process of manufacture.

11266. To something else besides alcohol and water?—Yes.

11267. Your definition of whiskey is a little open, is it not?—It may be.

11268. May I take it then that the value of the whiskey is due to its flavour?—Yes, to its flavour.

11269. And that flavour is due to the process of manufacture?—Yes.

11270. Is there anything in the question of age? Is that a constituent factor?—The age is a factor.

11271. To that extent then the process of manufacture is of importance?—Yes.

11272. Do you regard the patent still process of the same value, or smaller value than the pot still for obtaining flavour?—I think the patent still produces a whiskey with a strong flavour. It can be produced, I understand, with a strong flavour or not.

11273. Will you kindly let us know from your own experience, because it seems to me that you have had very considerable experience and can give us information from that experience? Is the patent still spirit from your own knowledge of equal value to the pot still so far as flavour goes?—No, not quite, but it has a distinct flavour, and the pot still has not.

11274. The pot still can fetch a considerably higher price than patent still, age for age, in the market, can it not?—Yes, owing to the expensive process of manufacture.

11275. That must be in the end the reason?—I should say so.

11276. Why do you buy pot still?—I buy it for flavouring purposes.

11277. Therefore the flavour is of value?—It is not absolutely necessary for flavouring.

11278. I do not know that I quite follow you?—It is not necessary to mix the pot still with patent still to give it a flavour.

11279. To give the patent still a flavour?—Yes. The patent still has a flavour of its own.

11280. Do you sell much patent still whiskey?—Yes.

11281. Is it in a large proportion to the blend that you sell?—No.

11282. Is the blend in larger proportion?—Yes.

11283. To what do you ascribe that?—I ascribe that to the taste of the general public who prefer a light whiskey to a heavy one.

11284. Is that blend sold at a higher price than the patent?—Yes, it is.

11285. So that it has a higher money value?—Yes, it has a higher money value, because we have to pay more for the pot still.

11286. Do you personally know the tastes of Scotch patent still spirit and Irish patent still spirit and English patent still spirit?—No, but I can tell the difference between Irish patent still spirit.

11287. The difference between that and what?—The difference in flavour.

11288. But what are you comparing it with?—I cannot compare it with English or Scotch because I do not know them. I do not know English or Scotch patent still whiskies. I have never had any business with them, and I do not know anything about them.

11289. With what do you compare Irish patent still whiskey—with the pot still?—I do not quite understand your question.

11290. I asked you just now did you know personally the difference in flavour between English, Irish, and Scotch patent still spirit?—I do not know the English and Scotch patent still spirit, and I could not say. I have never compared the two.

11291. All you can say is that the Irish patent still spirit differs very markedly from the Irish pot still spirit?—Yes.

11292. Do you sell much pot still spirit?—Yes.

11293. Is that large in proportion to the patent still spirit?—No, much smaller.

11294. I mean as a self whiskey?—As a self whiskey we tried to push it but failed to do any good.

11295. But as compared with the patent still whiskey as a self whiskey?—We sell very little patent still whiskey as a self whiskey.

11296. So that practically your business is confined to a blend?—Yes.

11297. And the value of that depends upon its flavour?—Yes.

11298. Have you different qualities of blends?—Yes.

11299. Would you mind revealing to us the proportion of grain spirit in your poorest quality? I do not press for an answer if you would rather not give it?—I would rather not.

11300. Would you mind telling us the proportion of grain spirit in your best quality?—We sell the pure pot with all proportions.

11301. Do you mind naming the highest proportion?—Pure pot still.

11302. And in the blend?—Ninety per cent. of pot still, 80 per cent. of pot still, and 70 per cent. of pot still.

11303. Are your best quality of blends less expensive than the pure pot still?—Not necessarily.

11304. Do you find, as a matter of fact, that you have an easier sale for your blends than for the pot still?—Yes, we have a much easier sale for our blends.

11305. Now, as to the use of the word "Whiskey." Would you give the term "Irish whiskey" to patent still spirit by itself?—I would if made in Ireland.

11306. What do you regard as the dominant character of the spirit that you export to England and abroad—its flavour, you told me?—Yes.

11307. But you do not export much patent still spirit, do you?—Very little patent still spirit.

11308. If a customer abroad asked you for Irish whiskey would you supply patent still spirit by itself?—No. We should give him a blend.

11309. Why not? You call it Irish whiskey?—It depends largely on what we understand the market requires.

11310. The foreign market?—The foreign markets are very similar to the English market, they like a slightly flavoured whiskey.

11311. Which they can only get through blending with the pot still?—No, not necessarily.

11312. But you told me you would not sell the patent still as "Irish whiskey" to them?—The Irish whiskey we always blend, for no particular reason really. It has been a custom in our business from the start to blend it, and we always blend it, but I see no reason why we should not sell them pure patent still.

11313. Would you be prepared to do it from this moment?—I would rather not say. I see no reason why it should not be done. Patent still whiskey has a distinct flavour of whiskey.

11314. But supposing an English producer of patent still spirit produced a spirit indistinguishable from the Irish patent still spirit and chose to export that amongst your customers abroad as "Irish whiskey," what would you say?—I should say it was not Irish whiskey.

11315. On what ground?—On the ground that it was not made in Ireland from Irish water.

11316. Your idea of Irish whiskey is simply a geographical one?—Yes, and the climatic influence.

11317. You do not think the reputation of Irish pot still whiskey and the prestige of that whiskey is worth

protecting in any way?—I feel that pot still whiskey made in Ireland is Irish whiskey, the same as Scotch.

11318. Would you suggest any classification of whiskies—would you require them to be named as Irish pot still whiskey and as Irish patent still whiskey, or Irish blended whiskey?—I see no reason to classify them. I think it is all Irish whiskey if made in Ireland.

11319. From the geographical point of view, but you have left my mind in a state of doubt as to how you would protect the reputation of Irish whiskey, which I gather has been built up on the pot still product?—Not necessarily on the pot still product.

11320. But as a matter of fact it has been?—I did not understand that that was so. I never understood that Irish pot still whiskey had built up the reputation of Irish whiskey. I think not.

11321. Then what has?—I think the blended whiskey has built up the reputation of Irish whiskey.

11322. What is the necessary ingredient in blended whiskey?—Patent still whiskey I think it has a strong flavour of whiskey.

11323. Why blend it at all if it has such a flavour?—It is not necessary to blend it. I have no doubt a merchant could now build up his reputation on patent still whiskey alone. Thirty years ago we happened to blend it, and we have blended it ever since.

11324. But inasmuch as the patent still spirit is so much cheaper than pot still I am surprised that it has not been tried if you think it could be done?—I have no doubt it has been done.

11325. But has it succeeded?—I would not be surprised if it had succeeded.

11326. All the evidence that has been given before us is the same that you have given us, namely, that you sell very little patent still as self whiskey?—The reason for that is because nobody has ever tried the patent still alone, but I have no doubt that it could be.

11327. It has been tried a good deal in Scotland?—Has it?

11328. Yes, but there again the blend is the favourite?—There is Cambus. I think Cambus has not had time to work its reputation up. I think it is only a matter of time when it will.

11329. You look forward to the time when the pot still whiskies may be given up altogether?—I would not like to say. I do not know what the result will be.

11330. You employ patent still spirits made in different parts of Ireland, I believe?—Yes.

11331. Do you know the Cork patent still spirit?—I have seen it.

11332. Can you distinguish it from the Dundalk?—Certainly.

11333. It has a distinctive flavour?—Yes, it has a distinctive flavour.

11334. And all these patent still spirits improve on maturing in casks?—I think so.

11335. What is the minimum age of the patent still spirit that you sell? Again, do not answer if you would rather not?—I would rather not.

11336. The blending of Irish whiskies has been going on in Belfast for a considerable number of years past?—I understand Messrs. Dunville have blended for over 100 years.

11337. Now with regard to the materials. Would you restrict the materials in any way in the use of the patent still process?—I would restrict them to grain only.

11338. And the process of saccharification effected by malt?—I do not understand that.

11339. You would restrict them to grain?—I understand that patent still whiskey is made from grain only.

11340. I see you have given in your *precis* reasons for the popularity of Irish blended whiskey. Would you mind giving us those reasons, because it would be well to have them on the minutes of evidence?—Yes. (1) A blend that combines various flavours is as a rule more mellow and palatable than any single distillery whiskey. (2) It is doubtful if any single distillery's whiskey can be maintained at such a uniform character as blended whiskies. (3) By blending, a greater variety of whiskies can be produced, ranging from the cheapest to the most expensive. (4) No distillery in Ireland produces a whiskey resembling the blends (in style and mellow flavour) which are sold over the United Kingdom in still increasing quantities over the pot still. (5) The operation of blending is of great benefit to the whiskey, whether patent or pot still, on account of the atmospheric influences and the benefit of the mixing and rousing which undoubtedly assists the maturing of the whiskey. Foreign and British spirits cannot be blended in bond for home consumption, but can be blended for export when the word "mixed" is stencilled on the cask, though I believe this is rarely done, and speaking for our own company—never. (6) Some of the pot still Irish and malt Scotch whiskies could not possibly be drunk by the general public, I believe, with any pleasure, as they are too heavy to be drunk as self whiskies and require first to be blended with patent still whiskey, and such blends give as much flavour or more than many of the silent pot whiskies.

11341. I gather from you that your opinion is that blending is a perfectly legitimate and wholesome practice?—Yes.

11342. And it is not done solely to cheapen the prices?—That is so—it is not done solely to cheapen the prices.

11343. What is your opinion as to the compulsory bonding of whiskies?—I believe that compulsory bonding for one or two years would serve no useful purpose, as to the best of my knowledge it has never been proved that patent whiskey even new is injurious to the public health. At present it is the custom of the blending trade to use pot still of at least three to five years of age with the patent, but it is not considered necessary to keep the patent an equal length of time in order to arrive at the same degree of maturity. Another reason is that I think compulsory bonding would be likely to have the effect of compelling merchants to use very much newer and cheaper pot still, as with compulsory bonding for say two years, where a merchant is at present selling a blend in which the patent still whiskey is under that age, in order to keep his price the same, it will be necessary for him to reduce the quality or age of the pot still used, which would be to the detriment of the consumer, and it would tend, as it were, to put a hall mark on all whiskies two years old, whereas some of the heavy pot stills are not considered drinkable until they are about four or five years old. Again the necessity of building new bonded stores, and the additional capital required, would be a very great hardship to blenders and traders, more especially at the present time when the consumption of whiskey is going down, as shown by the Revenue returns. If it is considered necessary to keep whiskey in bond for two years, other spirits such as brandy, rum, and gin, should also be kept in bond for a similar period, otherwise it would be a great handicap to the blenders and distillers. The extra expense to the Government and the trade would be considerable without any benefit, I believe, to the public.

11344. I see you are also adverse to standardisation of whiskey?—Yes.

11345. Now a question as to labelling of whiskey. Would you have any objection to labelling a mixture of patent and pot still as a blended Irish whiskey?—With regard to the labelling of whiskey, there might be no objection to this provided the proportions were not insisted upon.

11346. Would you have any objection to putting on a patent still whiskey by itself, "Irish patent still whiskey," and, similarly, "Irish pot still whiskey"? Would you have any objection to such distinctive labels for the information of the public?—No, I would have no objection.

11347. (*Mr. Guillemard.*) I see in your *precis* that you would not be in favour of the standardisation of whiskey by reference to its chemical constituents. I understand that is your view?—Yes.

11348. What is your reason for that view? Has anything happened in your experience that suggests that view? You suggest that it would result in fraud?—Yes.

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11349. Have you had any experience that bears out that view?—No, no experience.

11350. You say in your *précis* that you have had a number of circulars and samples submitted to you?—You mean with regard to brandy?

11351. Yes. What is your view? What happens?—With regard to brandy I understood for many years that it was not possible to buy pure grape brandy under 4s. 6d. to 5s. Since the pure grape brandy case and other prosecutions, I was immediately circularised by several firms in France offering pure grape brandy at 2s. 10d. I had never seen samples before similar, and I did not understand that it was possible to produce pure grape brandy at such a price. I have a sample here at the present moment, which has been offered to me at 2s. 10d.

11352. Have you tried it? Is it satisfactory from a potable point of view?—No, I should say not.

11353. Are you in a position to say whether it does conform to the required chemical standard?—I am not, except that I have a guarantee on my invoice, "Ethers over 100. Guaranteed pure grape, 2s. 10d. per gallon."

11354. You have not had it tested for yourself?—No, I have not.

11355. (*Dr. Cushny.*) Would you mind telling us the relative prices of those different blends? At what price do you sell your blend with 90 per cent. of pot still?—We sell it at 6s. 6d. per gallon.

11356. And what is the price of your cheapest blend?—We sell it down to 2s. 6d. per gallon.

11357. Would that depend entirely on the amount of pot still whiskey in it?—It varies according to the blend.

11358. Would it depend on the amount of pot still whiskey?—Practically the amount of pot still whiskey, or the age of the patent still, or the age of the pot still.

11359. Why do you suppose that people want to pay 6s. 6d. a gallon for it when they can get a whiskey for 2s. 6d.?—The whiskey at 2s. 6d. is naturally of a much less age than the whiskey at 6s. 6d.

11360. What is it that makes the difference in the values of the 6s. 6d. and the 2s. 6d.?—The mellowness and the maturity of the whiskey, and the flavour.

11361. Is one willing to pay nearly three times as much for a good flavoured whiskey?—Not necessarily the flavour, but the mildness and the mellowness of the whiskey.

11362. Do you not think that the pot still constitutents are more important—the foundation?—It is an important part, of course.

11363. Do you not think it would be fair to distinguish it by some distinguishing label as regards the amount of pot still?—I think it might be, but I think it would be leaving it very much open to the honesty of the dealer in whiskey.

11364. (*Chairman.*) The label on what?

(*Dr. Cushny.*) The label on the bottle?—How are we going to handle the bulk whiskey, which is the greatest trade of all in England?

11365. You agree it is not right and fair that two products varying so much should be labelled in the same way?—Yes.

11366. (*Chairman.*) You do not want them labelled in the same way? If they are labelled at all they ought to be labelled according to the truth?—Yes, labelled according to the truth if labelled at all.

11367. (*Mr. J. Y. Buchanan.*) In your trade do you understand by the word "whiskey" anything—either Irish or Scotch whiskey, whether made in a patent still or pot still?—Yes.

11368. You think that neither pot still nor patent still has a preferential right to the word?—I do.

11369. And you consider that it covers both?—It covers both.

11370. And if anybody speaks to you about whiskey you do not know, unless you know the history of the man, whether he really means patent still whiskey, or pot still whiskey, or a blend?—No.

11371. He has to furnish that information to you?—Yes, he has to furnish that information to me.

11372. We have had evidence that there is a very large amount of patent still whiskey made in Ireland?—Yes.

11373. And principally in the North, is it not?—Principally in the North, and in Dublin and in Cork.

11374. That is all sold as whiskey?—Yes, all sold as whiskey.

11375. Now is the amount of patent still whiskey that is made in Ireland increasing?—That I could not say. I do not know.

11376. Would you say in looking to the development of the trade in the production of whiskey that the pot still whiskey was increasing in its production?—I should say not.

11377. In your opinion would you say that patent still whiskey is probably more increasing than pot still whiskey?—I should say that the patent still whiskey is holding its own.

11378. And the pot still whiskey you think is going back?—I should not say that.

11379. You do not know?—No.

11380. The patent still whiskey is used very largely in all the whiskies that you send out?—In all the whiskies we sell.

11381. Supposing you or someone wanted to get a whiskey at a given price—you say you sell from 2s. 6d. up to 6s. 6d.—supposing that person wanted a whiskey at 3s. 6d., and the best he could get for the money, what kind of blend would you furnish him with?—I would furnish him with a good proportion of pot still, and with some age.

11382. But your pot still that you put into the 3s. 6d. whiskey could not have the same age as the 6s 6d.?—No. I would put in pot still at least three years old—nothing less.

11383. And as to the patent still, what kind of age?—The patent still would be a year or eighteen months.

11384. He would get a fairly mellow whiskey?—He would get a palatable whiskey.

11385. So that to a consumer getting a good article for his money patent still is the more valuable?—The patent still is the more valuable.

11386. And, therefore, it is the whiskey that it is most important to protect if we are going to protect either?—I should say so.

11387. (*Dr. G. S. Buchanan.*) I did not quite follow you with regard to brandy. When you had samples of brandy offered you with a guarantee as to ethers, that was at a price of 2s. 10d.?—Yes.

11388. What was the custom of your trade in buying brandy before? Used you to buy brandy that was guaranteed as entirely produced from the grape?—We bought brandy that was not guaranteed.

11389. 2s. 10d. was not an unusual price for brandy which was not guaranteed?—It was unusual to me. I had never come across it before.

11390. (*Dr. Adeney.*) That is French brandy?—Yes.

11391. (*Chairman.*) That would be a low price?—Yes.

11392. (*Dr. G. S. Buchanan.*) What would be the usual price for a cheap brandy?—4s. 6d. a gallon.

11393. A cheap brandy not guaranteed to be the product of the grape?—Until that case came on nothing was ever guaranteed.

11394. I understand that?—And the agents never mentioned whether it was made from the pure grape or not. They sold me what I considered to be brandy, which, in my opinion, is a much better brandy than I can buy now.

11395. I follow that. My difficulty was in understanding whether up to this time you had never dealt with any brandy, or never had been asked to deal with any brandy as low as 2s. 10d.?—Never.

11396. Do you now receive any guarantee with your brandy as regards its derivation from the grape?—Yes. I have a guarantee here with the 2s. 10d. brandy which says, "Ethers over 100. Guaranteed pure grape."

11397. (*Dr. Adeney.*) Does that mean all the alcohol is from the grape?—I cannot tell you. It is guaranteed "pure grape."

11398. (*Dr. G. S. Buchanan.*) You do not buy that brandy?—No. I have samples of it.

11399. But in the brandy you do buy, do you receive any guarantee to which you attach real importance as being *bonâ fide* that the brandy is the product of the grape?—My reason for asking for a guarantee at all is to protect myself. In case I get a law suit I can apply to these people to protect me. That is my only reason for getting a guarantee.

11400. You get no guarantee that is supplied by any association, or by any Government authority in France?—No.

11401. With regard to whiskey, I gather you supply publicans in England very largely, do you not—that is to say the public-house trade?—Yes.

11402. You supply them with Irish whiskey?—Yes.

11403. And supply them in many cases to price? You are asked to supply Irish whiskey at a particular price?—Yes, at a particular price. That is what we are asked for particularly. We get samples to match and we get the order if we can match them, but if we cannot match them we do not get the order.

11404. Are your customers in many cases the Brewery Companies?—Very few.

11405. We had some evidence in the very earliest part of our proceedings about Irish whiskey, in the case you refer to in your *précis*, that of Mr. Wells. Mr. Wells in Islington sold as Irish whiskey a spirit that consisted of 90 per cent. of new patent still spirit five or six months old, and 10 per cent. of pot still spirit: it was 25 under-proof, it cost duty paid 10s. 4d. a gallon, and it was sold as Irish whiskey at 18s. 8d. a gallon. Would I be right in concluding from what you have told us that you regard that as a perfectly proper description of Irish whiskey:—it was made in Ireland?—Yes, I would call it Irish whiskey.

11406. That it was a satisfactory Irish whiskey, and that it was properly so called?—Yes.

11407. You were asked a question with regard to giving notices. In another of these cases the whiskey was under the spirit limit allowed in the matter of water, and notices were given that it was so diluted. It is common enough, is it not, to put up notices in public-houses that the spirits sold are below the legitimate strength?—Yes, I understand that—below the legitimate strength.

11408. If a publican can do that, is there any reason why he could not put up a notice saying what the whiskey is sold as?—I see no reason.

11409. You raised the point yourself that there was a difficulty, that whereas on the bottle you could put a label stating what the liquor was, you could not do it in the case of bulk whiskey?—The point I raise is as to bulk whiskey, which is the biggest quantity of whiskey sold in England.

11410. At the present time it is the practice for the publican to make some statement with regard to his whiskey when it is to his advantage by means either of label or of exhibited notices?—Yes.

11411. Do you think Irish whiskey like Mr. Wells' whiskey, is what people abroad should accept as Irish whiskey without any notice? Do you think it is desirable in the interests of the Irish trade to send whiskey of that kind abroad as Irish whiskey?—I see no harm in sending it abroad as Irish whiskey.

11412. Do you have to make any declaration in connection with the export of your Irish whiskey?—Yes, I have in exporting to Australia.

11413. You could not send whiskey like that I have been speaking of to Australia?—Yes, as long as it is over two years old.

11414. But this was not two years old. This was a new grain spirit?—Yes, so I understand.

11415. I do not quite understand what reason you had for thinking that it would be difficult for the patent still whiskey to be kept for two years in bond. Taking your own whiskies, who would suffer by it?—I should think we would suffer considerably.

11416. You would lose your trade for new grain spirit?—No, we would sell the two year old, but we would require a greater additional capital, we would be practically in the hands of the distiller, who would bond first and charge us accordingly. We could not possibly sell whiskey at the price that we sell it at at the present time. A number of small blenders would be, I should think, completely wiped out if they had to find the additional capital, which it is almost impossible to do in the present state of the trade.

11417. (*Dr Adeney.*) Do you mean to say the blenders would suffer and the distillers not?—I certainly think the blenders would suffer.

11418. (*Dr. G. S. Buchanan.*) I still find that a little difficult to understand. What would be the difference in price to the blender in purchasing a two years old patent still whiskey as against a six months old?—It would depend on the price the distiller asked. Most of the small firms in Belfast, which I practically represent, would not stand the extra strain of paying the warehouse storage and 5 per cent. additional for his holding the whiskey.

11419. I am afraid I still do not understand. Surely the blender purchases his patent still whiskey at a price before he blends, does he not?—Yes.

11420. The only difference it is going to make to him is the difference in price between buying it new and buying it after it is two years old?—Yes, which would be a large increase.

11421. (*Dr. Horace T. Brown.*) Do you agree with the last witness that the Irish public would not take whiskey if they knew that it was the product of the patent still?—No, I do not.

11422. Do you think the general public in Ireland know the difference between patent and pot whiskies?—I could not say.

11423. Do they know that the patent still spirit enters into the composition of whiskies?—Distinctly they do.

11424. (*Dr. Adeney.*) Would not that vary a good deal with the part of the country?—Yes, it would.

11425. (*Dr. Horace T. Brown.*) Is your experience only with regard to the North of Ireland?—No. We have eight travellers all over Ireland.

11426. What is your opinion with regard to the patent still whiskey that is drunk in Ireland, speaking generally?—It greatly depends on the district. In the Dublin district, and in the South of Ireland, they have been brought up to use the well known make which Dublin is famous for. Down in Cork nothing but a particular brand is drunk, and in Waterford it is the same. Where there is a particular local distillery they seem all to cluster round it and drink its particular whiskey.

11427. Does the ordinary consumer know that there is patent still whiskey in most whiskey that he drinks?—I think so, distinctly.

11428. And he does not resent that?—I think not.

11429. You have told us your firm since its foundation in 1871 has invoiced the product of the patent still as whiskey?—Yes.

11430. Do you happen to have with you any invoices which you can show the Commission bearing on this point?—No, I have not.

11431. Has it been described in the invoices merely as whiskey or as grain whiskey?—Both as whiskey and as grain whiskey—sometimes one and sometimes the other.

11431*a*. And that applies to the patent still product alone as well as to the blend?—Yes, to the patent still product alone. I have never bought blended whiskey.

11432. With regard to the suggested classification of whiskey in your *précis*, how would you describe the ordinary Irish pot still whiskey? Would you simply describe it as Irish whiskey or as Irish pot still grain whiskey? What would be your suggestion with regard to it? I am assuming now that it is a whiskey made by the ordinary Irish mash of malted and unmalted grain?—I should call it Irish pot still whiskey.

11433. Without stating that it is a grain whiskey?

11434. (*Dr. Adeney.*) It never is called grain whiskey?—No, it is never called grain whiskey.

11435. (*Dr. Horace T. Brown.*) Not a pot still grain whiskey?—No.

11436. I am only assuming that some classification is made of that sort. I want to know what your idea is of the description of ordinary Irish whiskey?—Then there are the whiskies of the pure malt distilleries of which we have three in the North of Ireland. They will have to be described too.

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11437. How would you describe them? Would you describe them as "pot still malt whiskey"?—Yes.

11438. And the other as what?—As "Irish pot still."

11439. Without the interpolation of the word "grain"?—The word "grain" would come in if it was properly put upon the bottle.

11440. (*Chairman.*) I want to clear up some evidence you gave to Dr. Cushny about labelling, and I want to trace the transactions. The first trade transaction is between the distiller and the wholesale merchant?—Yes, that is so.

11441. The distiller would deliver to the merchant so much whiskey?—Yes.

11442. Is that in cask?—In cask.

11443. Those two persons are persons of business habits and with intelligence?—Yes.

11444. Do you think it necessary that there should be any compulsory labelling between those two parties?—I do not think so.

11445. Do you believe that both are capable of looking after their own interests?—I think they are both capable of looking after themselves.

11446. And I suppose invoices are sent in?—Yes.

11447. In the ordinary course of trade would the merchant expect to find in the invoices some description of the whiskey?—That I would not say. I do not know.

11448. What would the invoice state as a general rule?—"Plain British spirits."

11449. And the price, of course?—Yes, the price and a guarantee that it is made from grain, and that no acids have been used.

11450. I suppose the course of business brings to the mind of the merchant what he is receiving?—Yes.

11451. Would that be sufficient protection between those two?—Yes.

11452. May I bring you within the designation of the wholesale merchant?—Yes.

11453. You have your whiskey?—Yes.

11454. With whom do you deal?—I deal direct with the publican.

11455. Do you sell to him in cask or bottle?—Both bottle and cask.

11456. In sending to him, in the first instance you receive an order from him?—Yes.

11457. Which, I need not say, you fulfil?—Yes.

11458. You send to him an invoice?—Yes, I send to him an invoice.

11459. Does that invoice show that you have fulfilled his order?—Yes.

11460. What label would be of use as between you and the publican in the interest of the public and in your interest? Would it be of any use?—I suppose it would.

11461. What is the label?—Of course, we label all our bottled whiskey as "old Irish whiskey."

11462. How does that carry you beyond your invoice as between you and the publican?—It does not.

11463. Then what is the use of it?—We must invoice it as something.

11464. You have your invoice. You have told us you have sent an invoice in. What is the use of your label beyond the invoice?—The label is the description of what is in it.

11465. The publican has your description in the invoice?—Yes.

11466. Then what is the use of the label?—Are you speaking of the bottled whiskey.

11467. Either—you said you sell to the publican in bottle and in cask. If you in your invoice have told the publican what you are sending him, what is the use of stating it if it is in the invoice?—There is no necessity for repeating it.

11468. What could practically be the use?—I do not think there is any use.

11469. Now we come to what is material. The publican has got this whiskey, he has got his invoice and knows what he has got. Is that so?—Yes.

11470. Then he has to sell to the public?—Yes.

11471. The public does not know what the publican has got in his invoice?—No.

11472. Now we come to the amount of information that the publican should give to the customer. Is not that so?—Yes.

11473. Suppose a man goes into a public-house and says: "I want a glass of whiskey," the publican would take that from a bottle, or some machine in which the whiskey is held?—Yes, or a cask.

11474. Would the customer necessarily see the bottle?—Not necessarily.

11475. If the label is on the bottle and not shown to the customer it becomes of no use?—Of no use.

11476. Then I suppose in order to make it of use there must be some legislation to see that the publican should have the label on the bottle, and that he should show the bottle to the customer?—Yes, I presume if you wanted to give the public any information that would be necessary.

11477. I do not see myself how else it is possible. A statement by word of mouth is not sufficient, but if the customer does not see the label what is the use of the label?—No use.

11478. Then it amounts to representation in the writing on the label as distinguished from word of mouth what the article is. That is what I understand?—Yes.

11479. Do you recommend that should be made compulsory or not?—I think not.

11480. Why not?—I think that it would more or less mislead the public.

11481. I do not quite follow that. Why?—The reason is that much depends, of course, on the grade of whiskey used. Supposing I had on my bottle: "Pure pot still whiskey," it may be only new pot still whiskey of the very worst possible manufacture.

11482. In the first place you must act on the honesty of the person selling?—Yes, on the honesty of the seller.

11483. Supposing he wishes to do his best. What is he to put on this label? First you have to register pot or patent. Is that so?—Yes.

11484. Or it may be Scotch or Irish. Would the fact of his labelling it: "This is pot whiskey," or "This is patent whiskey," be any protection against the fraud of the seller?—I did not understand that there was any fraud.

11485. But I ask you to assume that it is protective against fraud. If he said: "This is pot whiskey," or "This is patent whiskey," the whiskey that is labelled "pot whiskey" may be very bad and very cheap pot whiskey, and the patent whiskey may be very good and dear patent whiskey. Where would be the protection?—I say that there would be no protection.

11486. Under such circumstances?—Under such circumstances.

11487. How far would you go in making the publican label the price of the whiskey to be charged by him or its age? Is that reasonable?—I think I should go more by age than anything else.

11488. I do not suppose you know the view of the ordinary customer of a public-house, but would it bring it to his mind whether whiskey had been four years in bond, or five years in bond?—I do not think it would. I really do not think they take a great interest in it.

11489. I think you will agree that it is an evil that a publican who has paid a very cheap price should come in with those who pay a very high price, and sell at the same price cheap whiskey as if it were dear? If you could prevent that you would be happy to do so?—I think it would be a proper thing to do.

11490. Can you suggest any means by which a man could be made to disclose what he has given for the article he sells?—I cannot. I have thought of it for some weeks and I can see no way.

11491. It would be desirable in your view if it could be done?—Yes.

11492. How would you deal with a blend? What label could be invented that could tell an ordinary mind what the blend was?—I could not say. I do not know.

11493. Supposing a blend was 80 per cent. of patent and 20 per cent. of pot, would you say so many years in bond?—My blend of 80 per cent. patent is ten years old, and the 20 per cent. of pot is ten years old, and on the other side of the shelf there may be a rival selling 80 per cent. of patent of two years old, and 20 per cent. of pot two years old, and they are of the same value on the label.

11494. I want some information with regard to giving protection if we can. You do not seem able to help us with any information that could be given to help the consumer by means of labelling?—I see no way that it is possible to do it, because the bulk whiskey comes in and the publican draws it from a tap in a cask.

11495. To be any protection it must be compulsory on him to show the label on the bottle?—Yes.

The witness withdrew.

Mr. John Jamieson Blanche, called.

11496. (*Mr. Guillemard.*) I believe you are sole partner in the firm of Messrs. J. J. Blanche and Company, whiskey blenders, of 69, Waterloo Street, Glasgow?—That is so.

11497. You are also sole proprietor of the Glen Elgin-Glenlivet Distillery, Elgin?—Yes.

11498. That, I believe, is a pot still distillery?—Yes, a pot still distillery—Highland malt.

11499. Though you are the proprietor of a Highland malt distillery you come before the Commission as an independent witness, and not as the nominee of any federation or clique?—That is so.

11500. It is made quite clear in your *précis* that your mind on whiskey is rather catholic than particular?—That is so.

11501. You propose to give to the Commission the benefit of your experience. How long have you been dealing with Scotch whiskey?—I have been in the trade for thirty-one years. I have been in business on my own account since 1881. For a large portion of that time I was a retailer—a wine merchant.

11502. That gave you an opportunity of ascertaining the view of the ordinary man in the street?—That is so.

11503. Do you sell direct to the public?—I sold then direct to the public.

11504. What has been the course of your experience? I see in your *précis* you state that in 1884 you took up the idea that you would sell nothing but pure malt whiskies?—Doing a family business as I did, and wishing to put before my customers the best article possible, I naturally inferred that pot still whiskey, being the dearer of the two, was the better. I started with that assumption. With that view I put on pure pot still whiskey, the best I could buy, and the results were not satisfactory.

11505. What conclusion did you draw from that? Did you modify your action?—I had to, or my business would have left me. I found that people leading an indoor life did not want a self whiskey, that it did not agree with them, and in fact they used to tell me that the objection to my whiskey was that they had a bad head in the morning—it was too heavy.

11506. You knew it was good whiskey?—I knew it was the very best whiskey.

11507. You came to the conclusion that the lighter whiskey was making headway?—That is so.

11508. Then you turned your attention to the grain spirit?—Grain and Lowland malts.

11509. With regard to them do you think that they are lighter, or that they are probably more wholesome spirit?—They are more wholesome—I mean, of course, we must blend them with a certain amount of Highland whiskey to give a flavour.

11510. The result of your experience was to go away from selling pot still only, and to move in the direction of selling patent still, either pure or blended?—I have never sold patent still pure unless as a dealer selling to a trader who was going to blend again.

11511. You moved in the direction of a blend?—Yes.

11512. Perhaps on this you would give us some idea of how you would describe whiskey by reference to its history?—The word "whiskey" has nothing whatever to do with either grain or malt, or with pot still or patent still spirit.

11513. I mean in its derivation?—Its derivation is from the Gaelic word "Uisque," or "Uisque-beatha," which means water of life.

11514. Can you quote any definition of what whiskey is?—I endorse what Dr. Annandale says, that whiskey is a spirit distilled from barley, wheat, oats, and other grains, potatoes, beet, and other roots.

11515. Potatoes, beet, and other roots?—Yes.

11516. When Dr. Annandale includes them among the materials from which whiskey is made, do you take it he is speaking historically, or that he is expressing the opinion that those are suitable ingredients?—It would be difficult for me to say whether he was speaking historically or not.

11517. When you quote him, in which sense do you quote him?—I quote him in the sense that I think whiskey is a term that ought to be left open, because somehow or other I look forward to a time when probably we may use other materials equally satisfactory from which to make spirit.

11518. Do you think that at present potatoes, beet or other roots are suitable, or do you only wish to keep the matter open so that they could be used in the future if, as I might say, science developed on those lines?—At the present moment I do not think they are suitable, but I am looking at it from the point of view of the machinery that we have for making spirit at the present moment. If it were found that those fruits, or vegetables, or whatever they are, would make good whiskey, I am afraid it would require somewhat different plant than what we have at the present moment.

11519. Given a change in plant and methods, you think it possible that other materials might come in in the future which are not suitable now?—I do.

11520. And you attach importance to not excluding them at present?—That is so.

11521. You think there is no risk at the present time. You said that at present you do not think those materials are suitable. Have you any reason to think at the present time there is any risk that whiskey in Scotland is made from bad materials?—None whatever.

11522. Is your experience that distillers compete with one another in getting the best materials?—That is so. I have had the unique experience of having been in every distillery in Scotland. I have seen all the materials in all stages of manufacture, and I know they are perfectly wholesome and sound.

11523. And from a monetary point of view would you say it paid to get the best materials?—It does. We get it in increased extract.

11524. Looking to the history of the word "whiskey," perhaps your evidence might be summed up by saying this, that it was originally spirit distilled from malted barley in a pot still, but that by evolution it has become a generic term, and has become applicable to spirit distilled from other materials by other processes?—Yes, I do.

11525. We might accept that as summing up your view?—Yes.

11526. Generally the result of your experience is that you have become a strong convert to the blending of whiskies?—That is so.

11527. Perhaps you would tell the Commission what the extent of your blending business has been?—From the 1st January, 1906, down to the 1st June, I blended 272,300 gallons of whiskey, taking those on an average of five over proof it would be roughly 286,000 proof gallons, or as the spirit is usually sold at twenty under proof, it would mean 386,000 gallons, that is in round figures. Of course, my business is a small one comparatively; it is a mere fleabite to some

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of the business done by the other bigger blending houses.

11528. But still it is considerable?—Yes.

11529. In your view the development of the blending system is at the bottom of the increase of the Scotch whiskey trade?—That is my opinion.

11530. That being so, have you any views as to whether it would be wise to impose any restrictions on the proportions of the different sorts of whiskies that may be brought together in a blend?—I think it would be very unwise to impose any restrictions.

11531. You might elaborate that a little if you would?—Of course, the quantity of pot still or patent still whiskey that should be used in a blend is so much a matter of public taste that it has got to be left to the distributor—to the party who is selling to the public, who is naturally anxious to keep his customers with him. It is for him to give them the blend that will be acceptable. It may be 70 per cent. of patent, and 30 per cent. pot, or it may be 30 per cent. of pot and 70 per cent. of patent—the other way. It is entirely a matter of taste.

11532. (*Dr. Adeney.*) As a matter of practice would it ever be lower than 30 per cent. of pot?—I think it might.

11533. For the better blends?—Yes. In large districts of Scotland they drink pure patent still, and when they use a blend it has a bare suspicion of pot still. That is where the difficulty comes in of drawing a hard and fast line.

11534. (*Mr. Guillemard.*) As regards quality do you consider that the blends at present are, generally speaking, rather good, and that the public is not imposed upon, nor has its health endangered?—The blends are good and well put together, and honestly handled. I think the public in some cases, particularly in this City, have cause to complain about the charges they have to pay.

11535. You mean in London?—Yes. What I mean by that is this. I will give an example: Yesterday I paid at the rate of 13s. 6d. a bottle for what we would call in Scotland ordinary whiskey. That is exorbitant. I do not think the public are getting value. It is out of all proportion to the original cost.

11536. According to your *précis* you think the public are sufficiently protected at present. What would you consider a fair price for the whiskey for which you paid this exorbitant price?—I paid at the rate of 9d. per London glass, which is not a Scotch glass. I reckoned it up and it came to 13s. 6d. a bottle. I should expect the same quantity in Scotland for 4d.

11537. (*Chairman.*) What would the publican probably pay for this 13s. 6d. a bottle whiskey?—I should say 20s. a gallon at proof strength, that is 3s. 4d. Then it is reduced after that.

11538. They do seem rather to have got the best of you?—Yes, and that is not easy.

11539. Did you say anything?—No, but I thought a great deal.

11540. You drank a little and thought a great deal?—Yes.

11541. (*Mr. Guillemard.*) That was an unfortunate experience. I gather you think the public generally are perhaps safer than you were. You think they are sufficiently protected by two Acts of Parliament?—That is so.

11542. Which are they?—The Sale of Food and Drugs Act and the Merchandise Marks Act. I think the two protect the public against adulteration if they are properly administered, and it is no use having Acts of Parliament if they are not put into force. The Merchandise Marks Act, I think, largely prevents goods from mis-description.

11543. Those two Acts cover the ground?—Yes, in my opinion those two Acts cover the ground.

11544. We have heard it stated before this Commission that a certain amount of very bad whiskey is to be obtained in low parts of various cities, and Glasgow is mentioned. Your experience does not bear out that there is a large amount of whiskey dangerous to health being sold?—That is so. My contention is that in Scotland we have no bad whiskey. Some of it is not so good as it might be, but we have none bad, and I think this is confirmed by the fact that when any samples that have been taken by the inspectors have been found to be wrong it has simply been that they have been adulterated below the standard by water, not that there has been any injurious foreign ingredient added to them.

11545. (*Dr. Adeney.*) Can you give the same good character to Irish whiskey?—I am not an expert in Irish whiskey. I think Irish whiskey is very good and wholesome too.

11546. (*Mr. Guillemard.*) Generally you would wish to maintain the *status quo* with regard to blends, and not to impose any restrictions on them?—Yes, that is so.

11547. That would be in the interests of your foreign trade as well as your home trade?—In the interests of the future development of the business generally, forming the opinion that we have done very well in the past on the lines we have been going on, and that we can do possibly better in the future if we are left alone.

11548. Then your conclusion generally is that both pot still and patent still and blends should be entitled to the name of "whiskey"?—Yes.

11549. Perhaps that opinion carries more weight coming from you as you are a pot still distiller yourself?—Yes. Naturally my interests are greater in the pot still than in the patent, but I recognise that the one is necessary to the success of the other under present arrangements.

11550. I gather that as a matter of business if you thought it would be good for your trade, and for the trade of other pot still distillers, you would not object to the killing of the patent still?—No, I should not. I should like to sell my own.

11551. But your view is just the opposite?—Yes, quite the opposite.

11552. With regard to pot still whiskey that you yourself make, do you make a specially strong spirit, what they call a "fat" spirit?—We make what we call a very heavy spirit. We use what are called dumpy stills, with a very short neck, very much shorter than the model here. I think it is certain that a short necked still with a big body produces a fatter spirit than the still with a long neck.

11553. I gather from your *précis* that you think if the term whiskey was restricted to pot still whiskey it would result in the fat Highland malts being knocked out in favour of Lowland malts?—That is so, unless we change our plant to make a thinner spirit. It is the weight of our spirit that is the objection to the present-day consumer.

11554. I think you made some experiments on your friends with different sorts of whiskey, which the Commission would be interested to hear about?—Yes. I invited the committee of the bowling green in my suburb to have their meeting at my house, and after the usual business was concluded, we had what is called a little harmony meeting. I thought I would do a little bit in the way of sucking their brains. I put three whiskies in three different decanters labelled 1, 2 and 3. There was nobody but myself who knew what these whiskies were. I asked them after they had tried them very carefully to write down the whiskies that they preferred, and the result of it was by three to one they preferred the blend.

11555. What were the three?—One was a 10 year old pure pot still. I am not going to mention any names, because I do not want to give a free advertisement to anybody, but it is believed to be one of the best pot still whiskies for drinking singly. The second was a 10 year old blend made of grain spirit, Lowland and Highland malts, and the last was a 10 year old patent still spirit.

11556. (*Dr. Adeney.*) Could you tell us the age of the blend?—They were all 10 years old—they were all the same. The voting was 3 to 1 for the blend, and the patent still spirit got more votes than the pot still.

11557. (*Dr. Cushny.*) Was the blend a Highland malt with a Lowland malt?—Yes, but with grain spirit.

11558. (*Mr. Guillemard.*) What was the number of those who were there?—Sixteen.

11559. Do you think they might be taken as an intelligent sample of the general public in the matter of knowing good whiskey?—Knowing them personally I think a very intelligent sample.

11560. (*Dr. G. S. Buchanan.*) They had not already tried whiskies before this experiment?—I do not follow you.

11561. I was wondering whether you made your experiments at the end of the evening or the beginning?—I follow you now. I assure you that they were all dead sober.

11562. (*Mr. Guillemard.*) I am going now to the point of labelling. I gather that though you wish all those three varieties, pot still, patent, or blends to be called whiskey, you are of opinion that dealers should state on the bottle whether it is a blend of malt and grain, a blend of grain and malt, pure pot still, or pure patent still?—Yes.

11563. And that that should be made compulsory?—I think it should be made distinctly plain and clear to the mind of the buyer what he is buying.

11564. On the bottle?—Yes; or in the case of a bar by a declaration. Let the buyer either see the bottle or let a notice be exhibited at the bar that the whiskey sold there is a blend of malt and grain or a blend of grain and malt, pure pot still, or pure patent still, as the case may be.

11565. (*Dr. Adeney.*) Where would you draw the distinction between grain and malt, and malt and grain?—Where the proportion of malt was greater than the proportion of grain I would call it a blend of malt and grain, otherwise I would call it a blend of grain and malt.

11566. (*Dr. G. S. Buchanan.*) May we see the labels?—I have forgotten them. I sent them forward to the Secretary.

11567. You have adopted this plan for some time?—I printed 2,000,000 labels prior to the Islington prosecution because I felt in my own mind that the public should be honestly treated.

(*Chairman.*) As you have sent the labels forward to the Secretary we can see them. (*The same were handed to his Lordship.*)

11568. (*Mr. Guillemard.*) With regard to your labels that you yourself use, how many are there?—Three varieties.

11569. The first is: "A blend of matured malt and grain whiskies upon the proportion of which its stimulating properties and high character depend."—That, I may say, is a label I use where the proportion of malt is greater than the proportion of grain in the blend.

11570. You put malt first?—Yes.

11571. Then your second one is: "A blend of grain and malt whiskies upon the proportion of which its stimulating properties and high character depend?"—The same label with the two spirits reversed. That is where the grain in the blend is of a greater proportion than the malt.

11572. The first one would apply to a blend of 51 per cent. of malt and 49 per cent. of grain, and the second one to one of 49 per cent. of malt and 51 of grain?—It would certainly, but that is the only way of getting over the difficulty.

11573. The third is "a blend of matured grain and malt whiskies upon the proportion of which its stimulating properties and high character depend"?—It is the same label, but I put below that: "Distilled in Scotland" to show that it had its origin in Scotland.

11574. Do you send these out with all your stuff or only where it is desired?—Not with all. We intimated to our customers that these labels were available and that they could have them gratis if they wanted them. Some take them and some do not.

Adjourned for a short time.

11575. (*Mr. Guillemard.*) I think the next point in your *précis* is with regard to the possibility of setting up a chemical standard for whiskey. What is your view about that?—I should strongly object to it.

11576. Will you give your reasons?—In the first place, I think it would not be conducive to quality. Assuming that a standard of ethers was set up, we might get a whiskey with a standard of ethers in order, and in other respects it may be deficient. It is a very difficult thing to set up a chemical standard.

11577. Your objection there would be that a perfectly good article might be excluded because it did not come up to the standard?—That is so.

11578. Is there a possibly greater danger than that, the other way on, that possibly an inferior article might be made chemically to conform to the standard?—That is where the great danger comes in. Supposing a standard was set up, I think it is possible an inferior article might be made to comply with that standard by the addition of certain chemicals.

11579. Did you hear Sir James Dewar's evidence, or have you read his evidence?—No.

11580. He made a great deal of that point, that it was possible to artificially manufacture whiskey to conform to any standard. Is that so in your view?—That is my principal objection to a chemical standard. Undoubtedly that could be done.

11581. Now to come to a smaller point. What would be your view on the proposal to set up a standard as to the quantity of patent still or pot still whiskey that had to be used in the blend?—I should object to that also for this reason, that in some districts a much lighter whiskey is wanted, and in other districts a heavier one is wanted. Take for example Edinburgh and the East of Scotland, where they insist on having a light whiskey, they would not take a heavy whiskey. In Glasgow it used to be the very opposite. The great bulk used to be made up from pure Highland malts of a very heavy type. Now for some years public opinion in Glasgow has been veering round to a lighter whiskey, and they are also coming in the same direction as Edinburgh and the East.

11582. It might get to 90 per cent. of patent still and 10 per cent. of pot still, or even less than that?—Quite possible.

11583. Then with regard to the suggestion that there should be an age limit set up, what are your views about that?—I am opposed to the setting up of an age limit.

11584. Perhaps you might state your views pretty fully as to that, because a good many trade witnesses have come here and have spoken in favour of this. If you, as a practical man, wish to take up a different view, you might perhaps elaborate your objections to it?—There seems to be an impression abroad that one can get drunk sooner upon a young spirit than upon an old one. I think that is quite a false impression. I proved by experiment upon myself that you can get drunk as soon upon one as the other. I put myself to inconvenience and illness in order to work out this experiment, and I found that the after-effects from having too much of the old spirit was far worse than the after-effects that I had from the young spirit. I do not put that forward as an argument for using young spirit, because I do not drink young spirit myself. It is too harsh for me. I drink an old spirit, not because I believe it is more wholesome, but because it pleases my palate, and I believe that a great many other people are in the same position as myself as regards that. There are two or three difficulties connected with fixing an age limit. Who is to make up the averages? I take it the fixing and the enforcing of an age limit would be in the hands of the Customs and Excise officers.

11585. That would be so?—The making up of those averages would undoubtedly cause a considerable amount of work—sometimes very difficult work. I think it would be hardly fair to the dealer. I may mention a case. Recently I paid duty on a cask of brandy which had gone down by age to 68 under proof. I am not allowed to sell that, without a declaration, at a lower strength than 25 under proof. I have got to bring up the strength of that brandy by the addition of young spirit, and I should lose a great amount of the value of my old spirit. That is one objection. Then the next objection is that this age limit, I think, would press very hardly on the small man, who buys his supply from hand to mouth.

11586. The small dealer?—Yes. He has not the necessary capital to hold his whiskey for two years in bond. The old spirit would get into the hands of the stronger firms, who would sit upon it until they got their own price. In fact, we see something of that just now. In Scotland the price of young grain spirit has gone up in recent months very considerably.

11587. When you speak of young spirit, within what age do you mean?—I take the makes of 1905, 1906, and 1907. These have advanced by jumps. The stronger

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houses in the trade are buying those whiskies, and sitting upon them, believing that an age limit will be set up.

11588. Set up by this Commission?—Yes, set up by this Commission, and that then they will be practically in a position to dictate their own terms to the smaller man.

11589. It is more or less of a gamble on their part?—It is.

11590. If an age limit is suggested for whiskey, would it, in your view, be necessary to apply it to other spirits as well?—Most emphatically. You would be sacrificing the home product if you did not.

11591. You mean you would be encouraging the sale of brandy, rum, and gin?—Yes; you would be encouraging the sale of brandy, rum, and gin as against the sale of whiskey.

11592. Gin is a home product?—It is a home product, but there is a large quantity imported from Holland, which is practically sold new. In fact as far as gin is concerned we have handled a certain amount of Hollands gin, and we cannot keep it, because the moment it takes a colour from the wood people object to it. They have been accustomed to buy their gin white.

11593. I think you want to make a suggestion as an alternative way of dealing with the difficulty, that, instead of having a compulsory age limit, there should be a differential duty. That has been put before the Commission by another witness?—Personally I am not in favour of any change, and, as already expressed, I am in favour of maintaining the *status quo*; but, if there is to be a change in the direction of an age limit. I would rather have it in the form of differential duties.

11594. I think that is enough for that point, because it has been put before the Commission fully?—I am aware of it. The only point I wish to bring before you is that one of the witnesses mentioned 6d. per gallon per annum as the difference. I think that is much too high, because taking the average price of the whiskey at 3s. a gallon, 3d. a gallon is quite sufficient to give the holder 5 per cent. for his money and provide for the loss in bond. If there is to be a difference, I advocate that it should be 3d. a gallon, and that it should be limited to four years.

11595. In your experience what is the effect of the Islington prosecution on the nature of whiskey that you sell?—I may explain that while the Islington prosecution was pending we had a number of requests and inquiries from our customers, especially in England, for blends made up of pure pot still malt. We complied with these requests, and in a good many cases got orders. We never got one single repeat order, and in some cases we had to take it back and give them the ordinary blend of grain and malt for it, and in a good many cases the buyers who kept the whiskey had themselves to blend it. Some of them unfortunately have some of it yet. They told me that without exception they did not get repeat orders from their customers.

11596. You have it still with you?—I have some of it still with me.

11597. Undisposed of?—Yes, undisposed of, and I am having to re-blend it.

11598. I make a private suggestion to you to try the Army and Navy Stores?—It is very difficult to get in there.

11599. (*Dr. G. S. Buchanan.*) Was that your own malt from your distillery?—No, they were malt whiskies bought on the market.

11600. (*Dr. Horace T. Brown.*) Containing a proportion of Lowland malt?—Yes, containing a proportion of Lowland malt. We made them as light as possible with the Lowland malt, and in each case we submitted samples, which the buyers approved of.

11601. (*Dr. G. S. Buchanan.*) They were supplied to a price?—We were given a limit of price, and we were asked to submit samples.

11602. (*Mr. Guillemard.*) I am not quite sure that this comes within the reference to the Commission, but I see you wish to advocate that it should be permissible to sell whiskey down to a strength of 35 under proof without declaration?—That is so.

11603. I should think it does not come within the terms of the reference to us. Your object in recommending that is in the interests of sobriety?—That is so. As you are aware, home and foreign gin is allowed to be sold to 35 under proof without declaration. In the interests of sobriety I think it would be a good move to put Scotch and Irish whiskey on the same footing. I believe a great deal of drunkenness is attributable to the unfortunate habit of "standing rounds" in public-houses. For instance, half a dozen young men meet in a public-house in the evening, and, by an unwritten law, each man has to stand a drink. They have half a dozen drinks of strong whiskey, and they are inebriated, and the chances are that they would not be quite so drunk if the whiskey was diluted. I think that Scotch and Irish whiskey should be allowed to be sold down to 35 under proof.

11604. In other words, you think the existing law, which was passed in the interests of the consumers, operates against sobriety?—I think, to some extent, it does. In the case that I have mentioned just now of buying old brandy, I think the same thing applies to whiskey; in some cases before you take it out of bond it is below the strength you are allowed to sell at, and you lose the character of the fine old spirit by putting a young article in it.

11605. (*Dr. Horace T. Brown.*) Does it very often occur that such a spirit runs down to below 35 under proof?—Not very often, but there are cases where brandy goes down in strength in some bonds. There are cases where I have seen it down to 50 and 60 under proof.

11606. (*Mr. Guillemard.*) Perhaps you could summarise the effect of your evidence?—I summarise my evidence under seven headings: (1) Pot still, patent still, or blends of both are entitled to be called whiskey. (2) When sold, they should be described on the label as either pot still, patent still, or blend. (3) I do not approve of an age limit. (4) I do not approve of any restriction either as to plant, material, or methods of manufacture. (5) I do not approve of a chemical standard for whiskey. (6) I do not approve of a standard of malt to be used in a blend before it can be called whiskey. (7) I do not approve of any legislation that would restrict the trade in its legitimate operations, apart from what may be necessary to protect the public from adulteration.

11607. (*Dr. Cushny.*) With regard to the definition of whiskey that you gave us, can you tell us anything about the authority of the definition?—I should say it goes back to the mists of antiquity—to the old smuggling days.

11608. Who was Dr. Charles Annandale?—The Editor of the "Popular Encyclopædia," published by Blackie and Son in 1885.

11609. Does the definition exclude potato spirit?—No, it includes it.

11610. Would you include it?—With our present plant I would not. I do not think we have a plant that would give satisfactory results.

11611. What do you mean by that?—The distiller can make his whiskey quite as cheap from grain as he would be able to with potatoes with the plant that he has at the present moment. In making whiskey from vegetables or fruit you have to ferment your vegetables and fruit and have to turn it into wine before you can redistil it.

11612. You have to do the same with grain?—Yes, but it would be a different process. You have really to make your vegetable or fruit into a wine, and probably keep it for a period before you could redistil it.

11613. It is not a matter of flavour, is it?—I should not say that potatoes or vegetable matter would ever become a substitute for whiskey made in a pot still, but I am speaking of grain spirit, which is more neutral in character, and contains very little flavour.

11614. Potato spirit is made in large quantities in foreign countries?—Yes.

11615. If it were made in Scotland, would you call that whiskey at the present time?—I do not think there is anything in law to prevent it being called whiskey.

11616. Would you be willing to accept it as whiskey?—Not as made by our present method of manufacture. We must make different plant if we are going to use vegetable or fruit matter.

11617. What is the difference between German potato spirit and Scotch whiskey?—I should say that

when they were seen new it would be very difficult for most people to tell the difference. It is after they develop that you can tell the difference, because foreign plain spirit is almost neutral—absolute alcohol. Scotch spirit contains a certain amount of oils and flavour which develop with age.

11618. It is a matter of flavour?—Yes, it is a matter of flavour. I might explain that my object in leaving the material open is that the hands of the distiller, or manufacturer, should not be tied, because it is quite possible that we may discover material and plant for making equally good spirit, and probably better spirit, at a lower price than we are doing just now. I know of nothing at the present moment, but I believe it is quite possible, and, therefore, I think the manufacturer's hands should not be tied.

11619. That is rather defining the whiskey of the next century?—Yes. I think the manufacturer should be encouraged as far as possible to search for those things. Instead of being tied down to one hard and fast thing, he should be rather encouraged to look about him, and see if he can find anything better.

11620. You make some statements about the intoxicating effects of taking heavy pot still spirit. What are those statements based upon?—They are based upon actual experiments made upon myself. I have taken, what we would call, a good skinful of patent still spirit, and gone to bed, and I have got up the next morning with a perfectly clear head. I have done the same with pot still whiskey, and I have got up the next day with a fearful head. It is accounted for by the essential oils that are contained in the spirit. The one, the patent still, is a light spirit.

11621. This is a very important experiment, and we must go a little more into detail. Are you sure the skin was just as full both times?—Perfectly. I should rather think that the balance would be in favour of the patent still.

11622. (*Chairman.*) What constitutes a balance in favour—little or much?—I took sufficient of each spirit to believe myself that I was intoxicated, and I went to bed, and I had, what would be called, a sleep, not a very refreshing sleep. I judged by the effect upon me the next day.

11623. (*Dr. Cushny.*) Do you mean you took the same quantity—did you measure the quantity?—In both cases I took the same quantity of spirit of the same age.

11624. (*Dr. Horace T. Brown.*) Of the same strength?—Yes, of the same strength, and of the same age.

11625. (*Dr. Cushny.*) Which do you think began to have effect first?—The patent still, but it ended very much sooner. It is easily explained, because the patent spirit, being light, is evanescent, and goes to the head at once, but it gets out of your system quicker.

11626. With the patent still spirit you could not detect any headache whatever?—That is so.

11627. I want to get at any possible differences. Were the experiments quite parallel? Did you take them at the same time of day?—I took them at the same time of night—immediately before going to bed. I did not want to be knocking about.

11628. (*Chairman.*) You took it lying down?—Yes.

11629. (*Dr. Cushny.*) You think it is simply a matter of difference in the amount of essential oils?—I do.

11630. The essential oil is probably about half as much in the patent still spirit, I take it, as in the pot still spirit. That is the general run of things—that there is about a half to a third as much of the essential oil in the patent still as in the pot still spirit?—I really could not say.

11631. That is the evidence. You always took the same amount of each?—Yes, I always took the same amount of each.

11632. Did you repeat the experiment often?—No, I just tried it once.

11633. You only made one single experiment?—Yes, I made only one experiment, and I waited carefully until I felt I was in good condition. I was not off colour, and I was not in ill-health.

11634. Were the experiments on successive evenings?—Yes.

11635. (*Dr. G. S. Buchanan.*) Which experiment came first?—The patent still spirit I took first.

11636. (*Dr. Cushny.*) I am afraid I cannot accept that as evidence?—Possibly not. I am not prepared to repeat the experiment.

11637. (*Chairman.*) Had the effects of the first night quite worn off when you commenced the second?—I felt as fresh as a lark after the first one.

11638. A lark under the influence of whiskey is rather novel?—After the experiment with the patent still spirit I got up perfectly fresh the next morning, and after a good bath I was quite fit for my work; but with the pot still it took me nearly a week to get right. There were some effects hanging about me that I did not quite like, and I attributed those to the stomach being upset by the essential oils in the spirit not being digested.

11639. (*Dr. Cushny.*) I think you have made some experiments with old and new whiskey on yourself?—Yes.

11640. Did you find that the after-effects of the old whiskey were more lasting than those of the new?—Yes. The new whiskey I took had never been in wood.

11641. Was it six days, or six weeks old?—It was not a day old—it came from the still.

11642. How old was the old?—Seven years.

11643. How many experiments did you make?—I made two series of experiments—with new patent still and old patent still—and then with old pot still and new pot still.

11644. Did the old patent still have any injurious effect?—No.

11645. You did not find any difference between the new patent still and the old patent still?—None; but I did in the case of the pot still.

11646. As to the new pot still, did it produce any symptoms at all?—It produced the symptoms of intoxication.

11647. Just like the patent still?—Yes.

11648. You suffered from headache, and so on, from the old?—Yes, with the new pot still, too, but not to the same extent as I did with the old. I made two weeks' experiments with those. I took one week for the patent still, and another week for the pot still.

11649. Did you have them each night?—I took them at night.

11650. Each night?—On succeeding nights, taking the young whiskey first and the old whiskey afterwards. I first gave myself the new patent whiskey, and the following night I took the old patent whiskey. Then I gave myself a week's rest. Then the following week I took the new pot still whiskey one night, and took the old pot still whiskey the following night.

11652. The new pot still whiskey gave you a headache?—Yes.

11653. Do you think it was quite fair to try the one immediately after the other when you had had a headache that morning?—Probably it might not be quite fair, but I think I was capable physically of making the experiment.

11654. Then there is one point I want to ask you about. I do not quite understand how the Merchandise Marks Act protects the ordinary consumer against misdescription?—It would protect him in this way. If it were possible that plain or German spirit was used in the blending of Scotch whiskey the Merchandise Marks Act would protect him against that, because that is not recognised here as whiskey—foreign spirit.

11655. But is anything recognised as whiskey?—I should say spirits made in this country are recognised as whiskey

11656. But it is not legally whiskey. Whiskey is not a legal term?—Possibly not; but I think it would be a breach of that Act to describe a German spirit as Scotch whiskey, if it were possible. Of course, it is impossible, because the differential duty is against it; but if it were possible that some unscrupulous trader might colour a flavoured German spirit, and sell it for Scotch whiskey, I say that man could be got at by the Merchandise Marks Act.

11657. Supposing an Irish blender mixes Irish patent still with Scotch pot still, and sells it as Scotch pot still whiskey, do you think the Merchandise Marks Act would protect him?—That is a case where it might be very difficult to find out, because grain spirits, whether made in Ireland or Scotland, are so much like

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each other when young that it might be very difficult to find out. I think the main thing we want to do is to protect the public against adulteration.

11658. It is protecting the public against a thing that does not actually exist, is it not?—It does not exist at the moment, but there is no saying but what it might creep in. Of course, the inspectors are very smart, and are always looking out for samples, but they have not been able to find anything but water; but there is no saying how long that state of things will continue.

11659. But what the public generally feels is that it is not protected against getting a very poor variety of whiskey when it asks for a good variety of whiskey. Do you not think some protection is needed for that much more than for the adulteration which does not exist?—The great bulk of the British public are now drinking whiskey freely, and whether they will or not they become judges. It is like a lady who is continually drinking tea, whether she can help it or not she becomes a judge of tea and can discriminate between good and bad. It is the same with whiskey. If the public are continuously drinking whiskey they must get acquainted with it, and they reject the bad and take the good.

11660. There is the possibility that whiskey may at some time be adulterated. You wish to take the precaution of preventing that occurring?—Yes.

11661. On the other hand, there is no doubt that the quality of the best brands is as good as ever, and you do not see that it is necessary to protect them at all?—No. It is very difficult to prevent adulteration. Of course, in Scotland we all drink whiskey, and if the publican or hotel keeper gives us bad whiskey we do not go there again, or we take the whiskey back to him and tell him to give us something better. In Scotland our retailers are mostly free independent factors, and they vie with each other in buying the best whiskey that can be got.

11662. You wish to spread the sale of whiskey in London?—Yes.

11663. It is your business to do that?—Yes.

11664. You suggest a scheme by which a blend containing 90 per cent. of malt should be separated from a blend containing 10 per cent. of malt, do not you?—No, I only suggest that it should be labelled. I do not think the buyer would be prejudiced if it is declared on the bottle what he is getting.

11665. I do not see how you can reconcile that with your former statement that you do not wish anything done that could not be done under the Merchandise Marks Act and the Sale of Food and Drugs Act?—I only mention those two as being sufficient to protect the public from adulteration.

11666. (*Dr. Adeney.*) I see that Dr. Annandale's article is dated 1885?—Yes.

11667. As a matter of fact, were such things as potatoes, beet and other roots being used in Scotland for the production of whiskey at that time?—That is a question I could hardly answer.

11668. I gather from the evidence that we have had that it was not?—I should think it was not.

11669. Can you then put forward Dr. Annandale as a reliable authority on the subject?—I could not say that. We look upon such articles in the encyclopædias as being written by experts.

11670. I quite sympathise with your wish to keep open the road to progress in every possible direction, but it is important to get some fundamental idea as to the origin of whiskey, and it seems to me the practice of the trade now and for some years past has been pretty well defined as to the materials?—Yes.

11671. Those materials, we have been informed, are malt and cereals?—Quite so, up to the present point.

11672. In the present state of trade if we were asked to define whiskey we must take it as we find it?—Yes.

11673. And we cannot be biassed by considerations for what it may be in the future?—My only wish in putting forward this argument is to leave the manufacturer with a free hand for picking up any improvements either in plant or material that might crop up.

11674. I agree, but at the same time you ought to protect the vested interest of a great trade so far as that is legitimate and proper?—That is my concern. I am very anxious to do that.

11675. There is one idea I want to present to you. You see in the use of your Scotch whiskies and in the use of Irish whiskies we have had experience of the effect upon the human system for many years past, and we know if drunk in moderation and the whiskies are of good quality there is no reason to suppose that they have a bad effect?—None.

11676. Anyone coming forward with a new spirit made from different materials altogether, although flavoured similarly to whiskey, as we now understand it, would not be justified in assuming that the new whiskey would have similarly good effects upon the human system?—Of course, before it could be put on the market it would be carefully experimented upon.

11677. Would it not be fairer to the vested interests of the old trade that a new spirit coming from an entirely new source should be called by some other name?—I should not object to that for a moment.

11678. That would leave the road open to it?—Yes. I should not object to that for a moment.

11679. You mentioned as a differential duty a possible 3d. per gallon?—Yes.

11680. I should like to refer you to the evidence given by Mr. Jameson, one of the pot distillers from Dublin. It is at question 1628 of the evidence in the early part of our sittings. His evidence was that the increase in the value of pot still whiskey in Ireland on a year's keeping was from 4d. to 6d.?—I do not know what it was in Ireland. I wish it were that in Scotland, we should all make money. He may probably be speaking for his own whiskey which is unique among pot still whiskies in Ireland.

11681. But still 3d. a gallon would be hard upon him, would it not?—Yes, it might be. I am speaking from the point of view of a Scotch distiller and blender. I think 3d. would be sufficient to cover our charges.

11682. Later on I see it was suggested that 2d. per gallon represented the annual increase in value of the patent still spirit?—Yes, I agree that would be sufficient to cover it, but you would require to deal with whiskey as a blended article, and I would take the average of the two and take them at 3s. per gallon new. Supposing they were blended in equal quantities, I should say 3d. per gallon upon the 3s. would be sufficient to pay for one year the interest at 5 per cent. to recoup the holder. Of course there is no rule that could be put in force without pressing hardly on certain distillers. Jameson is unique among distillers in Ireland.

11683. (*Dr. G. S. Buchanan.*) Do you think much Scotch whiskey is sold at the present time containing younger spirit than two years old?—Yes, I think there is a good deal.

11684. If all spirits had to be at least two years in bond the difference that it would make to the owners would be approximately at the rate of 3d. a year per gallon?—About that.

11685. Do you think that would seriously affect the price of whiskey as sold by the glass, or as sold by the bottle to the consumer?—It would not, I think, seriously affect the whiskey as sold to the consumer, but it would seriously affect the profits of the small blender or dealer. We turn over parcels of single whiskey at a profit of sometimes one farthing per gallon, and you can gather from that that the market is very keenly competed for, and I think the small man would be shoved out. That is in large operations.

11686. You think the small dealer would be crushed out, although the requirements would be just the same on the small dealer as on the large dealer?—It would be the small dealer that would be crushed out, because he cannot afford to lock it up and mature it.

11687. Is the small dealer worth the distiller's consideration?—It is a heavy undertaking for distillers who are making 200,000 gallons a year as many are. We cannot afford to carry it. We have not the money.

11688. Two years' purchase would practically only affect the patent still whiskey, would it not?—It would affect both, but patent still possibly more than the pot.

11689. The patent still distillers, as far as one gathers, are concerns with a very large amount of capital, and they would probably accommodate the smaller dealer if his trade was worth their while?—They would accommodate him, but he would have to pay for it.

11690. Would not that come into the 3d. a gallon?—I do not think so.

11691. The effect as regards the public would be probably that they would not have to pay more for the whiskey than they do at present?—Quite. I do not think the public would have to pay more. To me the great objection to this age limit is that it squeezes out the small man.

11692. If the public has not got to pay any more, I do not quite see what becomes of your argument that this would be unfair with regard to brandy, rum and gin. The public has not got to pay any more for the whiskey. Why should they give up whiskey and take to brandy, rum or gin?—I do not think you see the point I am making. I said it would be very unfair to limit the age of whiskey if you do not limit the age of brandy, rum and gin, because to the extent of age, brandy, rum and gin would have the advantage if not limited. People might go on to those things.

11693. If the consumer has not got to pay any more, all it means is that he gets a little better whiskey?—I start with the belief, gained from experience, that a great many people like their whiskey young.

11694. That is another story. I gather that at your Highland distillery you make a whiskey specially suitable for blending?—That is so.

11695. And if there was no blending, practically there would be no demand for your whiskey?—That is so.

11696. With regard to the Sale of Food and Drugs Act, do you suppose when samples of whiskey are taken under that Act they are usually tested for anything else than the addition of water?—That is a question for an analyst. I should imagine that these samples find their way into the hands of the public analyst—the city analyst.

11697. They do?—I cannot answer for him, but I should say that he looks for every form of adulteration, otherwise he is not doing his duty.

11698. You are expecting him to do impossible things with the sort of sample he gets?—They usually buy a bottle.

11699. (*Dr. Adeney.*) But he has not got the use of the whole of the contents of the bottle?—He has the use of one-third of it.

11700. That is not sufficient?—He should ask for more. He can get it if he pays for it.

11701. (*Dr. G. S. Buchanan.*) If whiskey was allowed to be 35 under proof instead of 25 without declaration, would you suggest that the price of whiskey to the consumer should be lowered in any way?—Most emphatically.

11702. You would still have greater objection to paying 9d. a glass?—Yes, much greater; because I can add my own water.

11703. (*Dr. Horace T. Brown.*) If an age limit were imposed, although the consumer might not have to pay more for his whiskey, would he get, do you think, as good a quality of whiskey?—Under the age limit?

11704. Yes?—I do not think he would get any better whiskey.

11705. But would he get as good?—I do not think it would make much difference in the quality.

11706. If the middleman is not going to lose that 3d. per gallon per annum if he can help it, would not it result in his using a cheaper form of pot still whiskey for his blend, and a larger amount of Lowland than Highland?—The temptation would be for him to do that under an age limit.

11707. So that although the public might not have to pay more for the whiskey, it would be taken out of them in the quality?—It is quite possible.

11708. (*Chairman.*) I gather from what you say that, in general terms, you consider this whiskey trade is carried on under pure conditions without any adulteration or without any attempt at fraud in it. It is a good and pure trade?—That is my opinion. I have never seen anything else.

11709. I suppose you also would agree that the freer we allow trade to be done uninterfered with by the State the better, except for the purpose of checking the evil-doer?—That is so.

11710. The only effect on the trade of legislative action would be to check the evil-doer?—That is so.

11711. According to your opinion, where does the evil-doer come in in the whiskey trade?—I am not acquainted with any evil-doers in our trade. I only recollect in 30 years' experience one case where a certain blender—not mentioning names—in Leith was using methylated spirits for diluting his spirit. That is the only instance, and it was so unique that it was spoken about for a very long time. I should say that he was singular.

11712. In the first place, you have the check of public taste, which represents public opinion, where the customer chooses his own source where he deals—that is, apart from legislative check?—That is so.

11713. That is a certain check?—Yes, that is a check.

11714. There is, no doubt, is there not, the evil of a man buying very cheaply and selling very dearly?—Yes.

11715. Do you know personally of any instance where the State has ever interfered to prevent that being done?—I am not aware of any.

11716. You have been good enough to suggest some labels?—Yes.

11717. What is your object in putting those labels on the bottle?—I have no object except to intimate to the public what that blend is made up of.

11718. This is for the Scotch trade or anywhere they want it?—For any of my customers who wish to use the label.

11719. And you have them in England?—Yes, I believe we have some in Birmingham.

11720. Not in London?—We only give them where they are asked for.

11721. You have English customers?—Yes. We have not enough in England.

11722. You are trying to get some more?—We are always trying.

11723. Look at this label: "Matured malt and grain whiskies upon the proportions of which its stimulating properties and high character depend." If a customer comes in, I do not know whether he would see this, and all he would learn would be that Mr. Blanche was selling "matured malt and grain whiskey upon the proportions of which its stimulating properties and high character depend." What protection is that to any human being?—Of course, the first part is the intimation of what the blend is.

11724. What should we say to the second? It is quite true, of course, but what should we say to it?—We must all do our best to crack up our particular article, and we are confident that we are handling a good article and want to tell the public so.

11725. What does a customer who goes into a public-house and buys whiskey know as to those differences? First a blend of matured malt and grain whiskey, and then a blend of grain and malt whiskey. You say that makes a difference. Do you say that a customer knows the difference?—I quite admit that a large percentage of them would not, but how are we to arrive at any means of telling a customer?

11726. You do arrive at a means of telling them that Mr. Blanche is selling whiskey of stimulating properties of a high character. That comes in the whole three?—We must get a little advertisement out of it.

11727. There was a time when you had to pay stamp duties upon advertisements. I think they would have taxed you?—Probably.

11728. We have got from you that the trade is carried on very purely. You do not know of any adulteration being made, and the only evil you know of that should be checked is the difference between high and low price?—That is so.

The witness withdrew.

Mr. C. Pratt.

22 June 1908.

Mr. CHARLES PRATT, called.

11729. (*Mr. J. Y. Buchanan.*) You are the principal of the firm of Messrs. C. Pratt and Sons, wine merchants and blenders of whiskey, carrying on business in Lincoln and the neighbouring counties?—Yes.

11730. You wish to call attention to some points which have not been sufficiently, in your opinion, dealt with by the Commission?—That is so.

11731. Your first point is as to the matter of guaranteeing the age of spirits by Government. That, you think, should be done as it is done in Canada?—Yes.

11732. First of all, perhaps you will let us know how it is done in Canada?—I am not fully conversant with the methods adopted by the Excise. I only know the result that certain whiskey that is imported into this country from Canada has an age guarantee attached to it by the Customs over there. Seeing that it has been mentioned so frequently that it is desirable to protect the public by, might I say, suiting certain blenders' purposes by qualifying the amount of malt and patent still, I should say that would be eminently unfair unless due consideration was given to the age of the patent still whiskey and the age of the pot still whiskey. This knowledge the Customs and Excise have here, and they trace from the time of the distillation to the time it goes out into consumption the age of the various parts of a blend, and it would be a very small difficulty for them at a small charge, say, of 1s. a dozen, to allow a guarantee on a lead seal, or something suitable to be affixed in order that the public might be assured that the age is as stated. I am confident that the greatest cause of the diminution of consumption of various wines and spirits in recent years has been largely owing to the want of confidence of the public, that so many inquiries have been held as to what is pure whiskey and brandy, and so on, that the British consumer is beginning to wonder what he is actually getting.

11733. That would have to do only with the bottled whiskey?—Yes.

11734. Of course, by far the greater proportion of whiskey is taken out of bond in cask?—It could be done so. My point is, supposing selling as a wine merchant I was selling you whiskey, and I said: "My whiskey is eight years old," and you said: "The other man says that," I could say: "If you doubt it at all for a small extra payment of 1s. a dozen you can have it guaranteed by the Excise."

11735. Then you have to bottle it in bond?—Yes. My opinion is that many of these whiskies may be much younger than the public give them credit for, owing to there being no method of assuring the public.

11736. That is so, having no Government guarantee?—You can only give a man your word. Another unscrupulous person might equally give his word, but if you could say: "If you like you can have this same whiskey under Government guarantee," I think it would be an immense assurance.

11737. I think it would be. You think that the Customs or Excise officials could do that?—I do not see any reason why they should not. There might be some small charge made for their trouble, but it would be very small.

11738. You say that in the cheap trade, such as public-houses, you cannot offer pot still whiskey, because if it is new it is unpalatable?—Quite so.

11739. Could you tell us what you have to offer about that?—It would be very much nicer if all the world could have the best, but owing to certain people not being able to afford it, they must have a substitute, and I consider that a patent still that is old, flavoured with a pot still that is old, is much more wholesome than a pot still that is new and raw.

11740. Do you wish for any guarantee of that, or is it merely an expression of opinion?—It is merely an expression of opinion.

11741. You have noticed a change in your part of England, as well as elsewhere, that the public do not like the heavy whiskies?—No. They have a decided objection to anything of a smoky character, and the higher class malts are, many of them, very smoky.

11742. The particular flavour of malt whiskey they call by the name of "smoky"?—That is the local expression that I am quoting rather than my own.

11743. The best way of modifying that is blending it with patent still?—Provided it is old. Some people like to blend it with a thin malt, like a Lowland malt.

11744. Do you think your customers would detect the difference if you used for blending a patent still whiskey not so old as nine or ten years, as you mention here?—My experience of patent still whiskies when they are new and put into a blend is that they, what we call, throw up a smell of the still—I will not say it is a methylated spirit smell but is an objectionable aroma.

11745. Do you think it is necessary for your purpose to keep patent still whiskey for nine or ten years?—I would sooner use a nine-year-old patent still than a four-year-old thin malt.

11746. Would you sooner use a nine-year-old patent still than a three or four-year-old?—Yes, it is softer. You get the loss in bulk.

11747. It increases the price that is charged?—Yes, but I think you get the advantage in the age.

11748. Have you anything to say about your fourth point? You say "it is a common practice for proprietary advertised whiskies bottled in Scotland to have their bottles made small to the detriment of the purchaser; some go so far as to have bottles made to contain 7 bottles to the gallon in place of 6; a bottle should be a standard measure of 6 to the gallon"?—Yes. I should like to qualify that fourth point by saying 6½ bottles instead of seven.

11749. You say seven bottles?—Yes. I should have said 6½. I have not been able to bring one showing that there are seven.

11750. As a matter of fact, in your trade, when you are selling bottled whiskey do the bottles almost always run six to the gallon?—Many people have advertised that they do sell six to the gallon.

11751. The majority must be less?—I should not like to say it is the majority. I know of a number who do not sell six to the gallon, and I am quite satisfied that the consumer is quite ignorant of it, and the hotel-keeper is also ignorant of it because on his certificate he will get two gallons of whiskey with a dozen of whiskey permitted to him, but it would not actually contain two gallons.

11752. Taking the ordinary quart wine bottle, or beer bottle, they require more bottles to the gallon?—Beer is generally sold by Imperial measure.

11753. (*Mr. Guillemard.*) I rather doubt whether this is inside our reference. I think it is outside?—I thought it was an important matter to mention.

11754. There are a lot of matters that are very important, but we must keep within our reference. You have mentioned your point, and I do not think you ought to state more?—If you please.

11755. (*Dr. Adeney.*) Have you any personal experience of the difference in flavour between Scotch, Irish and English patent still spirits?—I have not much experience of the English patent still spirits, but the Irish and Scotch are very dissimilar after being aged.

11756. Quite a distinct flavour?—Yes.

11757. (*Dr. G. S. Buchanan.*) As against Irish or as between particular distilleries?—Particular distilleries.

11758. (*Dr. Adeney.*) Is there a distinguishing feature in the Irish flavour as in the case of pot still whiskies?—I rather distinguish those in this way: that some are rather hard, and some are round in their flavour. I do not think they are as distinct as Irish and Scotch whiskies, which are as distinct as port and sherry are in wines.

11759. I gather that your object would be to keep up the reputation of the various whiskies in the trade so as to retain public confidence?—Certainly.

11760. I do not know that you would care to give us what your idea of whiskey is?—I think whiskey may be fairly taken to be the product of cereals—grain generally.

11761. Either from the pot still or patent still?—Yes, either from the pot or patent still.

11762. Would you think that Scotch patent still spirit should be called Scotch whiskey?—Certainly, I should say that.

11763. Just as much as the pot still?—Yes.

11764. Do you think that would be fair to the Scotch trade?—You could not sell the smoky Scotch whiskey unless it was thinned down.

11765. I am talking of the two selling separately?—I have never had experience of selling patent whiskey by itself. I have only used it in blending.

11766. (*Dr. G. S. Buchanan.*) What do you suggest in regard to age? Is it that the Excise could assist the blender to make a statement as to the age by labelling in the same way as they do in Canada, and that the blender should pay for the privilege?—Yes.

11767. What you are suggesting is a voluntary act, that if the blender goes to the Excise and says, "Here are these facts about this whiskey which you can verify. I want you to verify them. I am prepared to pay for this label at the established charges," that that should be given?—Yes, that that should be given which is now forbidden. "Under the Excise regulations the officers are not to interfere with labels or names used on bottles or cases by proprietors beyond seeing that no label or inscription be used on either which contains such expressions as 'bottled in bond,' 'bottled in Customs (or Excise) warehouse,' or any expression which implies official supervision."

11768. (*Mr. Guillemard.*) Where do you get that from?—The Excise regulations on wet bonds.

11769. Is that drawn up for the officers of the Excise?—Yes, for the officers of the Excise. I think it is public property, and it is written by one of the examining officers.

11770. I do not know the book. Let me look at it?—Yes. (*Handing same.*)

11771. (*Dr. G. S. Buchanan.*) Do you know, as a matter of fact, whether they do charge for the label in Canada?—I am not familiar with the methods that they adopt.

11772. My impression is that it is compulsory there?—It would be much better if it were here.

11773. You would prefer it to be compulsory?—Yes, much.

11774. But at the same time you think the provision of some voluntary system of guarantee such as you speak of would be better than nothing?—Certainly.

11775. Do you know the United States practice in regard to the labelling of blends in bond?—I have no knowledge of it at all.

11776. I understand that the placing of the official label over the cork attesting that the spirit is bottled in bond in the case of the United States is made a privilege. It is only allowed in the case of whiskies that have been stored for a certain time in wood and in cases where the capacity of the bottle is correctly stated, and where the alcoholic strength is above a certain amount?—All that could be conformed to.

11777. It is something in the direction you were speaking of. You mentioned proprietary whiskies. I suppose one of your ideas in connection with what you have just suggested to us is to enable the blender who does not put out an extensively advertised whiskey to put out something that can compete with proprietary whiskies?—I do not think it would be very difficult for a blender to do that.

11778. I want to know from the trade point of view what it is you are going to get by this. It seemed to me that possibly what you had in mind was the objection which had been raised here before, that people go for whiskies with well known names simply because they have got such a general mistrust of anything that is sold as whiskey?—This is rather the point I heard stated in the House, that anybody could be persuaded to buy an encyclopædia or a pill that is advertised sufficiently. A wine merchant continually gets asked for various brands that have been floated upon the market by a speculative advertiser. To place a proprietary whiskey on the market here would cost at least £50,000 to ensure it a good sale. I have heard in Nottingham of some merchants there keeping twenty-two brands, but personally, I do not keep any other than my own.

11779. That is rather what I was suggesting, that you wish for something which you think the Excise can give or might give by agreement if the trade were willing to pay for it which will assist you in competition with the proprietary whiskies?—Quite so.

11780. (*Mr. Guillemard.*) With regard to the proproposed guarantee by the Excise and Customs, is age the only thing for which you ask a guarantee?—Yes. It was rather prompted by the fact that it has been suggested by many witnesses that the label should state the exact proportions of malt and grain. The exact proportions of malt and grain largely depend on the whiskies you are handling. There are thin malts and thick malts, and it would be quite misleading to the public, and would carry no information to them to say that a certain whiskey had 50 per cent. of malt unless they knew the age of that malt.

11781. What I mean is this. Are you asking that the Excise should guarantee the age only or the age and other things with regard to processes materials and other things?—One was to go hand in hand with the other. If you put a label on the bottle my experience is that it arouses suspicion. People say, "Why cannot I have all malt," or something like that. Unless you have something to allay suspicion, they see it is something different to what they have had before and imagine that somebody is trying to get at them.

11782. You have selected a thing that is much easier for the Excise to guarantee than anything else?—Yes.

11783. A great many people ask that the Excise should guarantee the materials and origin, but you only say age?—Yes. That is the only thing I ask for.

11784. That is a comparatively easy thing as compared with the others?—I understand it is.

11785. Then when you get to the age of blends have you any ideas as to what should be the age?—I take it if there is an eight-year-old patent whiskey blended with a ten-year-old malt in equal proportions, that would be a nine-year-old whiskey; but supposing a man had varied ages and there were fractions of years, I should say it would be sufficient to say, "This whiskey is guaranteed to be over six years old."

11786. You would take the youngest year and say it was all as old as that?—I should take the average year and divide the bulk into it.

11787. Then there is this difficulty. That guarantee is all right, and you put it on your bottle. Then the people take the bottle away. Say they do one of two things, either put the label on another bottle or put something else inside the bottle with the label on it. Is not that a very real danger when you get beyond the stage at which the Excise can control it?—It is something like these brandies, that people could fill a bottle of high-class brandy with an inferior spirit.

11788. At present the Excise are not guaranteeing the brandy?—No.

11789. Up to a certain point it may be that the Excise have a power of control, but take the bottle beyond that point, out somewhere beyond the control of the Excise, you see there is then a risk of your Excise label being possibly a danger to the public rather than a safeguard?—You are rather thinking of when it entered a public-house, and I am supposing a family wine merchant supplying a private family.

11790. Your thing might operate as a remedy over a part of the field?—Yes.

11791. Over the great extent of the field, and the extent where there is most danger it would not operate?—You could not stop fraud. It would be a fraud to do it.

11792. You think you might go as far as this, that it might possibly facilitate fraud?—I should not have thought so, because before persons dared to do it they would know that when they are interfering with the contents of a labelled bottle they are committing a fraud and taking a very serious risk upon themselves in doing so. I scarcely think the majority of the dealers are so unscrupulous.

The witness withdrew.

(Adjourned to to-morrow at 12 o'clock.)

TWENTY-SECOND DAY,

Tuesday, 23rd June, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. C. R. Haig.

23 June 1908.

Mr. CHARLES R. HAIG, called.

11793. (*Chairman.*) I believe your proper description is that of distillers' agent, whiskey merchant and broker?—Yes, my Lord.

11794. Are you a Past Chairman of the Wine and Spirit Association, and now on the Committee of that body?—I am.

11795. You are Managing Director of Haig's Cooperage, Limited?—Yes.

11796. Is that a limited company?—Yes, a limited company, both dealing in casks and manufacturing.

11797. How long have you been in the business which you now occupy in London on your own account?—I have been 36 years in the whiskey trade.

11798. And since your very early days have you been acquainted with distilling, and have your family been in it for a very long time?—Yes, for nearly two centuries. I come of a very old distilling family, although I have never been a practical working distiller myself. I have been in and out of distilleries in the three kingdoms, and know the general manner of working.

11799. For these reasons you have obtained a general and considerable knowledge in matters connected with the whiskey trade?—Yes, a general commercial knowledge principally, and also a certain amount of manufacturing knowledge, but I am not identified with any particular interest, either pot or patent. I represent both in London, and have always represented both.

11800. What is your experience in business between the two particular classes of whiskey, pot still and patent still whiskey? Do you deal in both?—Yes, I deal in both, and am agent for both pot still and patent still distilleries.

11801. Is there any proportion between the two? Do you find that one is more popular than the other? —The proportion between the two as blended, do you mean?

11802. In the first place as pure? Which do you deal in most, pot or patent?—I used to sell more pot in London than patent, but owing to the circumstances having changed now, that position has been rather reversed, and I sell now more patent. That I think, is owing to the spread of blending. London is the centre, and they do not buy now so much new pot still. I being an agent my business has now drifted more into selling patent still.

11803. Do you know of any particular time when the extension of the blending of whiskey came about? —It was just beginning in a small way when I was first in business, thirty-six years ago. That was in a comparatively small way, and of course it has gathered in a very great volume since. At the time I first came to London the Scotch whiskey sold was extremely young.

11804. Now I wish to ask you a question about this blending. You say thirty-six years ago it was in its young life—it was beginning?—Yes.

11805. Has it been progressing since then?—Yes, ever since.

11806. That means that the trade in it has increased very much in consequence of the popular demand for it?—Yes.

11807. To what do you attribute that popular demand?—As regards Scotch, that principally I attribute to the fact of the presence of large stocks of patent still spirits which were held, and also to large stocks of pot, and that the public taste was best met by the blending of the two.

11808. Surely the motive power that increased the demand would be the public demand for it?—I do not think the public took it in the volume they did until they got the blend of the pot and patent.

11809. Was it the public taste that in your opinion produced the increase of trade?—Certainly it was.

11810. In what direction did that taste run? Was it that it was milder or simply the question of distinctive flavour, or what?—It was milder and it was a better whiskey generally for the money when distributed to the public.

11811. What does that mean? Take the price of the blend. What relation did that price bear to the price of pure pot and pure patent?—When I was first in business the pot was very much dearer than it is now, and the patent was relatively dearer, but the relation of the two somewhat changed, for pot has very much cheapened, and grain too, but hardly in the same proportion.

11812. The grain is the patent?—Yes.

11813. Pot has gone on cheapening?—Yes.

11814. When you get a blend I suppose you have the medium between the two prices of pot and patent?—Yes.

11815. And the proportion of the price must be in proportion to the different percentages used of those two blends of pot and patent?—Yes.

11816. It speaks for itself?—Yes, it speaks for itself, but a cheaper article will be cheaper when old than a dearer article when it is old.

11817. I want the proportions of the pot and patent so as to produce the price of the blend. The age, of course, is a material question in price?—Yes.

11818. Which of those two whiskies improves more by age in your opinion?—The capabilities of improvement in malt—in pot—are very much greater undoubtedly.

11819. Why do you draw a line between the capabilities of improvement and the actual improvement? —Because I think that pot will go on improving very much longer than patent. I look upon it from the point of view of the amount of age necessary to make the article palatable.

11820. What do you say as to the policy of applying the name of whiskey "Scotch" or "Irish," or whatever it may be, or "whiskey" generally to both pot and patent still productions?—I have always held that the designation "whiskey" could be applied to any spirit made from corn by a still.

11821. What meaning do you attach to the word "corn?" Is that the general term cereals?—Yes.

11822. As to cereals, native grown or foreign?—I do not think native grown has anything to do with it as regards any particular kind of cereal, whether foreign barley or foreign wheat, or foreign oats.

11823. Then we come to maize?—Yes.

11824. You would include maize, I gather?—Yes.

11825. What do you say as to rice?—Rice I am not so certain about. It is very exceptionally used, and I really would not like to give an opinion upon it.

11826. The result is that to cereal productions you would apply the term "whiskey," equally to pot and patent?—Yes, my Lord.

11827. And to blends?—Yes, and to blends of pot and patent.

11828. Have you anything to say as to where the words "Scotch" or "Irish" ought to come in?—My natural remark would be that I should take an article made in Scotland to be Scotch, and an article made in Ireland to be Irish. I once jokingly said of a pot still whiskey that was made in the Irish still in Scotland that the only Irish thing about it was that it was made in Scotland.

11829. Now as to your practical experience. What do you say both as to the desirability and practicability of labelling this whiskey in each of these different stages? We went yesterday through a great deal with regard to that as between the distiller and the merchant. Do you see any necessity beyond the invoice of the one telling the other what the whiskey is?—None whatever.

11830. What can be done, if anything, in the public interest—the consumer's interest—to ear-mark that whiskey which is sold in retail and small quantities by probably the licensed victualler to the consumer across the counter?—To ear-mark the whiskey as patent still or pot?

11831. Yes, and in every other capacity too. First take pot and patent. What do you say as to its practicability or its desirability?—Assuming the patent still is whiskey, and assuming the pot still is whiskey, I should submit that any blend of these two sold together should be called whiskey.

11832. I am on pure pot and pure patent. Will you leave the blend for the present? What do you say is the desirability or practicability of informing the customer by regulation of what that whiskey is which he is drinking?—I do not see what end would be served by it.

11833. In the first place, in England do the general public know anything about pot and patent still whiskey?—They know hardly anything except what they are told in the police-courts, and so on.

11834. They know what they like?—Yes, they know what they like.

11835. And if there is difficulty in communicating to them that it is pot or patent still they are getting, then I suppose there would be greater difficulty in communicating to them the blend and the nature of the blend?—Yes, a far greater difficulty to my mind.

11836. Now, going back to what occurs to a licensed victualler, what do you say to the evil which may occur in the case of a licensed victualler getting a very cheap patent still whiskey of a low class and paying a very small sum per gallon for it, and also getting some very good pot still whiskey, which is dearer? A customer comes in and says: "Give me some whiskey," for which he pays, say, 4d. a glass. The publican, not unnaturally, gives him the very cheap whiskey and charges him the same as if he were giving him the pot still whiskey at a dearer price. Of course, it is very desirable that the customer should not be charged more than he ought to be charged?—Yes.

11837. Have you in your mind any way by which you could prevent such a charge being put upon the customer?—I cannot designate any check that could be put on the charges of any article in a public-house, or in any other retail establishment.

11838. Do you think the ordinary customer would be prone to say, "Oh, this is bad stuff"?—Yes.

11839. What do you think the current price of a glass of whiskey is?—3d., 4d., and 6d.

11840. And the price varies according to the quality, age and quantity?

(*Dr. Adeney.*) And the strength?—Yes. You might say that strength is reduced to the lowest legal point, as a rule.

11841. (*Chairman.*) Supposing a man goes into a public-house and stands on one side of the counter and says, "Give me a glass of whiskey." As a matter of practice would the licensed victualler ask him what kind of whiskey, or what price, or what strength, or anything else it was that he wanted, or would he go to some particular kind of bottle and pour it out as a matter of course?—The customer might ask for Scotch or Irish, but if he said "Irish" he would probably draw it from the tap of the price that the man asked for, or was accustomed to have.

11842. Some of my colleagues say that there is a great variation of price. Does the customer say, "I want a glass of 3d. or 4d. whiskey," or does the publican say, "What kind of whiskey do you want"?—My knowledge is very limited with regard to going into public-houses, and I will tell you why. It is because I generally ask for whiskey from a special bottle when I do go into a public-house, and then I have a reasonable guarantee of what I am getting.

11843. I expect you know a great deal more than an ordinary person, but I want to see if there is an evil between the customer and the publican, and if there is an evil to see whether it can be checked?—It depends on what you call an evil. If you think that a patent still should not be sold as whiskey, I must say the publican would probably give his customer an article that would be called pot still that would not please him half so well as the patent.

11844. I am speaking of the evil of the price. I am speaking of a man selling a very cheap low-class whiskey at a high price, and I want to know whether there is a way of checking that?—I do not think there is much selling of very low-class whiskey at a very high price.

11845. There is the power to do it which is potential. If there is no check put by the customer on a particular whiskey at a particular price the licensed victualler can do as he likes?—That may be said of every article that he sells, and of every shop of every kind, that a man may not get good value for his money, but that is his look-out, and he need not go there again.

11846. Unfettered trade you go on?—Absolutely.

11847. What do you say to the detention of whiskey in bond?—Would you allow me to put before the Commission a price list of mine of 26 years ago, in which I put under the heading of "whiskey," "grain whiskey" as one. It is only to show that the designation of whiskey is attached to grain.

11848. You produce a price-list of yours, dated 1st June, 1882, in which you apply the term "Scotch" and "Irish" whiskies to grain whiskies produced by the patent system?—Yes.

11849. What do you say to compulsory detention in bond?—In the abstract, like a good many others, I am in its favour, but when I have, particularly as a practical man, and a man connected with the cask trade, to contemplate the difficulties, it is a totally different matter. The difficulties seem to me so numerous, and in some cases you might say without very minute supervision almost insuperable.

11850. Will you state some of them?—In the first place there is one that is well-known to the Commission, and that is the size of the vessels and the nature of the vessels in which the spirit is stored.

11851. How does that create a difficulty?—For the simple reason that the object of keeping it in bond would be to alter the character of the spirit by ageing, and the vessel might be of a nature not to alter it at all, and therefore the age of the spirit would not take place, although technically, it would be two or three years old, as the case might be. So that it depends on the size of the cask in which it is stored, and the nature of the cask in which it is stored, and the making of that cask impervious, which might be easily done, and is done, to the atmosphere, whereby there would be no loss, and whereby the spirit would remain practically unchanged. I mention, for example, the spirit "drums," as they are called, owing to the shape and size of them, for importing German spirit. They have a glaze on the inside to avoid loss in transit. This glaze makes the cask

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absolutely or almost impervious to the atmosphere, and the spirit is unchanged, there is no loss by evaporation during the transit of those casks, and there would be no loss worth mentioning, I think, in such casks if spirits were stored in them. Therefore you would have to provide that the casks should be of a certain size, not more than such and such a size, and also that they were made of a certain material, and also that the material was not treated on the inside so as to make it impervious to the atmosphere.

11852. Putting this objection of yours on one side for a moment, what do you say is the period during which the two classes of whiskey would be benefited by being held in bond?—I know of malts that go on really improving up to 15 or 20 years.

11853. It would not be practical to make a compulsory detention for 15 years?—No, of course not. Grain spirit, on the other hand, I think, reaches its best period earlier, but certainly it is all the better for being kept five or six years as a matter of rule, or even more.

11854. As a practical trader, in your opinion, what would be the inconvenience to the owner of the whiskey as regards his capital if you put the whiskey in bond and he could not sell it? If a man had capital he would get recouped by the extra price, but if he has not capital how is he to get on?—He could not keep it, and he would have to get somebody else to keep it for him.

11855. That somebody else has to find the capital?—Exactly.

11856. That would be an inconvenience?—He would be inconvenienced by the payment of the interest. I want to add this, that from my knowledge of the coopering trade I could produce a cask, no matter how small, that would virtually give up the spirit almost unchanged after it was bonded two years, and it would escape the notice of the Excise authorities, who would have to exercise very minute supervision. Suppose that the glaze that I have spoken of on the actual inner surface of the cask were covered by a thin inner casing of wood, which is quite possible, the cask would keep the spirit in it absolutely unchanged.

11857. Have you anything to say as to the detention in bond of foreign spirits?—Yes. As regards foreign spirits, of course, we are placed in very great difficulty, because there we would be at the mercy of any authority who could certify as to age, except we kept it in our own bond for two years. With all due respect to foreign Governments, and foreign officials, a certificate of age from certain quarters—I will not mention names—would not have the weight which our undoubted proof of detention in bond by our own Excise officials would bear.

11858. Of course, the principal foreign spirit is brandy?—Yes, our principal foreign spirit is brandy, but it touches also Colonial spirits—rum.

11859. What is your idea as to the advantage gained by the detention of foreign spirits that come over here, which may be called young, and also for what time do you say they ought to be detained? First of all, take the brandy that comes over?—There, again, it all depends. I would not consider that the two years that has been put forward by a good many is a reasonable time. I think two years, both for brandy and whiskey—that is good brandy and good whiskey—would be about the worst time you could detain it.

11860. Is new brandy injurious to health?—That I am not able to say much about.

11861. Is it disagreeable to the palate?—That I do not know.

11862. I do not quite see from your state of knowledge that you suggest there should be any detention in bond of the imported spirit?—I am not suggesting that there should not be any detention in bond, but I am merely putting forward what are my objections to it, and what I consider are the practical difficulties of enforcing the detention in order to ascertain the result which is desired by those who advocate it.

11863. Is it your idea now that a great deal of new brandy is imported into this country?—Quite so.

11864. Quite fresh?—Yes, quite fresh, and kept here. This touches one of the questions your Lordship asked. It is kept here because the guarantee of age here in the custody of our officials is considered so much better than if it were merely to reach us with the guarantee, or even an invoiced age by some foreign merchant.

11865. Is this new brandy fiery—objectionable to the taste?—It is far more so than old brandy, I should say.

11866. Would a customer find that out so as to be able to correct the sale of an unduly new brandy?—Yes, most customers would, and particularly a real grape brandy unblended, but, of course, my knowledge of foreign spirits is not extensive.

11867 You are against the detention of foreign spirits in bond?—Yes, owing to the difficulties in the way of so doing.

11868. (*Dr. Horace T. Brown.*) Your definition of Scotch and Irish whiskey would be purely geographical?—Yes, purely geographical.

11869. Take patent still spirit. You would maintain that it should be called whiskey?—Yes, I have always called it so, and I have always looked upon it, and have always known my colleagues to look upon it as whiskey.

11870. Are you of the opinion that it might be called Scotch whiskey if produced in Scotland?—Certainly.

11871. And in Ireland it might be called Irish whiskey?—If produced in Ireland from any still in Ireland, and from any still in Scotland.

11872. For instance, you would not think it desirable that patent still spirit made in Scotland should be called Scotch grain or Scotch grain spirit, or Scotch grain whiskey?—No, I cannot see the necessity for it, because I think there is as much difference between grain spirit and some pot stills as there is between some pot stills *inter se*.

11873. There is one statement you made about the influence of the size of the cask. I think, perhaps, you have not made your meaning perfectly clear. Your argument, I believe, is this, that the action of maturing which goes on in bond is dependent on the surface action through the cask?—Undoubtedly.

11874. And that the surface of a small cask is proportionately greater than the surface of a larger one?—Yes, and produces a proportionately greater effect on the spirit in it. I have practical knowledge of it because I have often found spirit in a quarter cask showing fully a year's age more than that in hogsheads and butts.

11875. You think if an age limit were stated it would not be fair to treat quarter casks and hogsheads on the same basis?—No, I do not think it would.

11876. (*Dr. G. S. Buchanan.*) In practice what is the size of the casks in which the greater part of the whiskey is matured?—Hogsheads are the favourite I think for malts, but I think there is a larger proportion of butts for ordinary patent grain spirit.

11877. A butt being how much?—A butt is 108 or 110 gallons, a hogshead is 54 or 55 gallons, and the quarter cask is 27 or 28. The Scotch measure by what they call plain distillery casks, which are larger.

11878. The butt is the largest in practice?—Yes, it is the largest in practice.

11879. So that if your two years' detention applied to the butts the whiskey contained in the smaller casks would improve a little bit more than that in the butts?—Yes, and if there were double butts, treble butts, and very large butts, the loss in evaporation and everything else would show in the keeping a smaller loss corresponding to the greater size of the cask.

11880. But supposing the two years that has been suggested by some witnesses were applied to butts as a maximum unit, there would be no hardship in that as regards the improvement of the whiskey? The improvement in the smaller cask would be a little greater, but that is all?—Yes. I do not speak of hardship in the matter at all.

11881. I do not quite understand what advantage it would be to glaze the casks, and otherwise, to make them impervious?—The merchant would not have his loss by evaporation.

11882. I thought you told us that the Excise would have no means of detecting this. Would not they at once detect that there had been no evaporation?—They could detect a glazed cask by careful examination, of

course, but what I was saying is that it is within the resources of coopering to make a cask with an inner casing of wood over a glazed surface which would have the same effect.

11883. (*Dr. Adeney.*) Have you known that to be done, as a matter of fact, with a potable spirit?—No, never.

11884. It is a pure assumption that you are going upon now?—I assume that it might be made because I know that it could be made.

11885. (*Dr. G. S. Buchanan.*) I quite understand it could be done, but I do not see in whose interest it is. If there is a check upon the detention in bond being of a satisfactory kind, surely it would come to the notice of the controlling authority that these butts which were filled in the first instance with whiskey at the end of two years contained the same volume?—Yes, he would save the evaporation and loss. You must remember that where a cask is pervious and is not glazed on the inside the greatest loss takes place, of course, in the first year owing to the absorption.

11886. You think it would be more worth the while of the owner of the whiskey to avoid the loss by the evaporation, and to get a larger volume, than to get the benefit of the maturing for two years in the shape of less harshness of the spirit?—There are plenty of people that it would suit better to make that saving. I should much prefer to see an inducement given to keep it in bond than compulsory detention, that is to say, I should very much prefer seeing a rebate given on the duty, say, of 4d. per annum and clearance after three years being subject to that rebate of 4d. a year. Then it would be worth while for a man to keep his whiskey.

11887. You have no doubt in your own mind that keeping whiskey, even the comparatively plain whiskey, for two years or longer, in some cases is a good thing for the quality of the spirit?—For the palatable quality of the spirit, yes. I see no evidence that old is more wholesome than new. That is as far as evidence yet shows.

11888. Do you drink new patent still whiskey yourself at all?—No—it is merely as a matter of palate, as far as whiskey is concerned. I have seen no definite statement that the younger spirit is injurious. I drink it blended, of course, and old.

11889. Do you drink the new patent still spirit blended?—No.

11890. Did you tell us that you had much experience of the certificates that are received from foreign countries in regard to blending?—It is a thing lately instituted about which I know.

11891. Are you prepared to say that the certificates which are given at the present time in regard to detention of brandies in bond in wood for a certain length of time are unreliable?—No, I do not pretend to say that the existing certificates are unreliable. I do not know of any certificates except those from France.

11892. Are those French Government certificates or certificates given by the merchant?—They are the different coloured permits given by the internal revenue authorities, the permit originally attached to the cask when bonding which, I believe, attaches to the particular cask right through until its arrival here.

11893. Are you getting that in the case of new brandies now?—That I really do not know. I do not represent brandies.

11894. What I wanted to get from you was whether it was the Government official certificates that were in your mind when you spoke of not being able to trust the guarantees that were received from abroad in regard to age?—No. My fear would be of new spirits of quite a different class reaching us with an unreliable certificate that it was of two years of age. I do not think our merchants would tamely submit to any other guarantee for the age than two years' detention on this side of the water.

11895. I notice in this circular of yours that you showed us of 1882 of whiskies that were then on sale, a large series of whiskies classed under Highland malts, Lowland malts, Grain, and Irish whiskies, and at the end it refers to plain spirits. You say, "Plain spirits in all strengths from 11 over proof to 60 over proof, and lowest market prices." What would the plain spirits be?—Plain spirits might quite possibly be some of the very spirits there quoted, but new and for a different purpose. For instance, I am not sure that in that very year I was not agent for a patent still distillery, and plain spirits are known to rectifiers, and the very same grain spirit that would be kept for blending with whiskey would be used for rectifying.

11896. I understand. I see in your *précis* you tell us that you think London grain spirits are entitled to be called whiskey and sold as such. Is that your view?—Undoubtedly, as much as other whiskies.

11897. In your business do you deal with Scotch, Irish and London patent still whiskies?—Yes, undoubtedly.

11898. Do you consider that, for purposes of blending, Scotch malt whiskey should always be blended with Scotch grain, and Irish with Irish grain, or would you blend Scotch malt with Irish grain?—I should not do it unless with the knowledge of the person to whom it was sold.

11899. Would you think it made any difference?—To the customer?

11900. Yes, to the consumer?—Not the slightest.

11901. You were going to tell us, I think, of the trade descriptions that you yourself had been in the habit of using with regard to blends?—No. I only referred to that list, because it puts under the head of Scotch whiskey grain as well as malt, and pot as well as patent. That is all I referred to.

11902. These distinctions, Lowland malts, Highland malts and Grain, as you have them here are, of course, perfectly well known to the trade?—Perfectly.

11903. I gathered from what you said just now that you did not consider it advisable in any way to give any indication of them to the public—to pass them on to the public in the form of labels?—Not advisable that they should be compulsorily given. I do not think the public understands what Highland and Lowland whiskies really are, and where they are made.

11904. It is conceivable that the public might find it to its advantage, in view of the great differences of cost of production and character, to have some information of that sort given to them. Do you not think so? For instance, if you asked for Irish whiskey and you got an Irish grain spirit, would you be altogether satisfied?—I personally?

11905. Yes?—Perfectly satisfied. I would not be satisfied if I got grain spirit after I had asked for John Jameson, and I must say that I prefer John Jameson.

11906. You can perhaps give us information on one point which may be within your practical knowledge. Do you pack whiskies for export?—To a small extent I do, but you may take it my business is generally in bulk on the market.

11907. (*Dr. Adeney.*) I am not quite clear what deduction you wish the Commission to draw from this price list that you have put in?—Only that, before these prosecutions were instituted and before there was any question as to what whiskey was, I, in common with a great many others, called patent still grain spirit "whiskey."

11908. Yes, you called it "whiskey," but I think you said further that you called it Scotch whiskey if made in Scotland or Irish whiskey if made in Ireland?—Yes, and then they are called Scotch and Irish whiskies, and under that general heading come the categories of Scotch including grain and the categories of Irish including grain.

11909. That brings me to the point. You do admit that under the word Scotch whiskey you have a classification of Highland malts, Lowland malts and Grain?—Yes, undoubtedly, and there are Campbeltowns there, I think.

11910. No, not in this?—No, I remember now that I put Campbeltowns among the Highland. In that particular list I put Islays, Campbeltowns and the North Country whiskies, as we call them, all together as Highland.

11911. So that when your customers deal with you they either specify Scotch Highland malt, Scotch Lowland malt or Scotch grain whiskey?—Yes. The bulk of my trade has been, of course, in the unblended whiskey, which is simply sold by the name of the distiller.

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11912. The name would tell your customers whether it was patent or pot still?—Undoubtedly.

11913. You say the same thing for Irish whiskies, but I did not see any Irish grain whiskies in your list?—No. I will explain that. You see, those in my list are all whiskies with age. It is not the custom in Ireland to keep grains. At that time, particularly, very little old patent still spirit was to be bought, and that will account for their not being quoted there.

11914. Then what you dealt with under the term Irish whiskies was practically all pot still whiskey?—Yes, practically all pot still whiskey. It was practically all pot still whiskey at that time, and there was nothing with age. I was selling Irish patent still, but I had no stock to offer, either held by myself or held by the market, of spirits with age made in a patent still, and now there is very little comparatively, whereas there were enormous quantities always at the disposal of the blender of Scotch spirits with age.

11915. At the present time, in fairness to the patent still distillers in Ireland, I think you are not quite correct in saying there are no aged patent still spirits in Ireland?—There undoubtedly is a large quantity sold now, but there was less when I speak of, but even now it is nothing in comparison with the amount of old Scotch grain held by bonders.

11916. I want to see clearly what we can deduce from this price list?—Exactly.

11917. Upon what does the value of whiskey depend?—It depends on how much you can make it for and how much you can get for it.

11918. But on what does that depend—what creates the demand?—As regards old spirits, undoubtedly the state of the wholesale market regulates the price, for instance, old grain now is much dearer relatively to its original price than old pot still ten years old, though they started very different in price.

11919. We have had that in evidence before us, but what I want to get at is what really fixes the value of whiskey. Is it not the flavour? What is the value attached to the term "Scotch whiskey" or "Irish whiskey"?—It depends by whom the value is fixed or thought of.

11920. You are all depending on the consumer, of course?—Yes. I think the consumer will very often give you a better price for an article that has cost you much less.

11921. It may be, of course, but that is not safe trading, is it? I am now taking the trade at large, and I want to know from you upon what do you think the value of whiskey depends?—The value must depend upon the cost of it to the person who has it.

11922. I see in this list of yours that I have here that you can get whiskies for as low a price as 1s. 10d., that is at the date of this price list?—What was the whiskey that is priced at 1s. 10d.?

11923. A grain spirit. You offer other whiskies at 8s. 4d. What would lead any one to give the higher price for the second whiskey that I have referred to?—Undoubtedly what from the market point of view you would call the superior quality of it.

11924. Upon what does that superior quality depend?—The same as in any other category of article, what the buyer of it desires to do with it and to use it for.

11925. But then it so happens that all these higher prices are in one of your categories, but not in all?—Undoubtedly.

11926. As far as the trade is concerned I am a perfect outsider and know nothing of the trade, and as a perfect outsider I am entitled to assume from this list of yours that the Scotch Highland malts are more valuable than Scotch grain whiskies?—I could produce another list of more recent years in which actually the prices of patent still spirits of certain ages, very big ages, had more than caught up the malts of the same ages. That was produced in evidence at Islington. I remember a list in which there was an old patent still spirit of an age the same as a malt, and the patent still spirit was the dearer of the two.

11927. That is rather an exceptional thing, is it not?—It is rather an exceptional thing. It is an exceptional state of the market, for, of course, the best pot still whiskey starts very much higher than the best patent still grain whiskey.

11928. Supposing you had an order from a customer for a quantity of Scotch whiskey and you were bound by the price of the best quality of Scotch whiskey, what would you supply?—The best quality.

11929. Yes, and what if you were not bound by price?—I think that undoubtedly if the very best Scotch whiskey that could be produced was asked for and the price was no object I would, of course, as in the case of brandy, take the very best brandy or whiskey that I could get. Malt whiskey undoubtedly is the superior article, and nobody has ever disputed that any more than I dispute that Mocha coffee is finer than others.

11930. I did not gather that you were prepared to admit that from the evidence given so far?—Yes. I undoubtedly say that malt pot still spirit is the finer article, just the same as I would say Cognac brandy is a finer article than a brandy made in Armagnac or other districts of France.

11931. So that your own list has really of necessity to distinguish qualities?—Yes.

11932. I see you would give the name of "whiskey" to London grain spirit?—Undoubtedly; it is as much entitled to be called "London whiskey" as Scotch Grain whiskey is entitled to be called "Scotch whiskey."

11933. Would you tell us from your own personal knowledge this? Is there any marked difference in flavour between Scotch, Irish and English grain spirit of similar ages?—The Scotch grain whiskies themselves differ very much *inter se*, so do the Irish and so do the London.

11934. Do they differ sufficiently for you to say that the London has a characteristic flavour of its own as much as the Scotch and Irish pot stills have?—No, not as distinctive as malt whiskies are among themselves.

11935. Do you not think it is fair to assume that the reputation of Irish and Scotch whiskey has been built up on the flavour of pot still whiskies of the two countries?—As to the reputation, that I should be prepared to admit just the same as I would admit that the reputation of Cognac brandy was built up on the top dressing used of what they called Cognac fines champagnes, but I would not put the cheaper kinds out of the category and say that they were not brandy.

11936. But you admit that there is a certain necessity for classification?—There is a necessity for a market classification, undoubtedly, but not for a public classification—it is for the benefit of the consumer.

11937. We yesterday had the evidence of a gentleman of some experience who said that he had bought whiskey here in London, and he calculated that the price that he paid for that whiskey was at the rate of 13s. 6d. a bottle, according to what he was charged?—By the publican?

11938. Yes, by the publican?—I think there are overcharges everywhere. It depends on the shop that you go into. If you go into a shop to buy a necktie, you get for 1s. 6d. one which is identical with one for which you would pay 2s. 6d. in another shop.

11939. (*Dr. Cushny.*) You said you thought brandy was fetched over and kept in bond in order that you might have a guarantee of its age?—Yes, we distinguish all old landed brandies such, for instance, as Hennessy's, Martell's, or Otard's, or any brandy that you name. An old landed brandy matured here, landed at the docks, say in 1890, would fetch a better price than an 1890 brandy shipped five years later say by the shipper himself.

11940. The Customs do not give you any guarantee of age, do they?—None whatever, but everybody knows that it cannot be touched while it is in our custody over here.

11941. It is simply the owner that has security—the public has not any real security?—No, it is a market question of price.

The witness withdrew.

Dr. ROBERT RATTRAY TATLOCK, recalled.

11942. (*Dr. Horace T. Brown.*) I understand you have some further evidence to give on a question which has a bearing on compulsory bonding?—Yes.

11943. Have you had an opportunity recently of studying a new process of distillation which gives to new whiskey some of the characteristics which are generally only produced by age?—Yes.

11944. Will you give the Commission some account of your observations on this point?—I attended at the distillery to see the process in operation.

11945. Whose distillery?—The Stronachie Distillery, in Perthshire, of Messrs. James Calder and Co. The plant had been installed there, and I attended while it was working and saw it working. I examined some of the products of that distillation, not that particular distillation, but a distillation by that process along with the product produced in the ordinary way without this improved process.

11946. May we have the name of the inventor of this new process?—Mr. Carroll.

11947. Can you give us any description of what the process consists?—The process consists in passing the spirit vapour into a pipe surrounded by a steam jacket containing steam, superheated to 300 degrees Fahrenheit. A certain proportion of air, also heated to 300 degrees Fahrenheit, is mixed with the spirit vapour and the mixture is afterwards passed into the worm and condensed in the ordinary way.

11948-50. Is that a patent process?—Yes.

11951. (*Dr. Adeney.*) Is it a patent still?—No, a pot still—the method is applied to the ordinary pot still.

11952. (*Chairman.*) There are letters patent for it?—Yes, there are letters patent taken out for it—a complete specification.

11953. (*Dr. Horace T. Brown.*) What is the general result of this process on the product?—The general result of the process on the product is that the whiskey, instead of having a harsh flavour as new whiskey generally has, has a soft flavour similar to what is produced by ageing to a considerable extent.

11954. You have examined these whiskies chemically, I believe?—I have.

11955. Do you hand in your report to the Commission?—Yes.

11956. You give here in your report the analysis of three different whiskies, from the same distillery, I suppose?—Yes.

11957. One is six years old, the other an ordinary new whiskey, and the third the one prepared by this new process?—Yes.

11958. I think the first thing you note is that the ordinary whiskey and the new process whiskey do not differ very materially as far as chemical composition goes?—No, they are all on the same footing as old whiskey and new whiskey ordinarily made—analysis does not distinguish between them.

11959. There is a little more etherification in your new process?—Yes.

11960. Do you think that process is one that conduces to etherification?—I do not think it does. I rather think it has not been the subject of investigation as far as the nature of the changes are concerned, but it seems to be rather the oxidation, or destruction, or decomposition of the by-products that give the characteristic flavour to new whiskey.

11961. Will you give the difference in flavour that there is between the spirits produced by the pot still with and without this apparatus?—There is an absence of the harshness which is invariably present in new pot still whiskey, and there is the softness which is obtained by keeping the whiskey in wood for a considerable length of time, but the process does not claim to give a product which will give anything like a sherry cask taste, which would require to be added afterwards, that is to say, the whiskey in order to get that particular sherry cask flavour would require to be kept some time in a sherry cask, but the softness of the product is obtained through the distillation by the new process.

11962. Have you ever had an opportunity of comparing this whiskey so produced with the de-aldehyded whiskey by the Hewitt process?—No.

11963. You regard this softness as being exactly similar to that which is produced by age?—Yes, in plain wood—that is to say, it has not got the sherry cask flavour, and that must be communicated to it by keeping it for some time in a sherry cask.

11964. You have some object in bringing these new facts before us?—Yes.

11965. Will you kindly state those objects?—May I be allowed to read from a jotting that I have made of my object in appearing before the Commission on this point. It is to make representation to this Royal Commission to the effect that in the event of their seeing fit to recommend a minimum time limit for the ageing of whiskey it would be desirable that they should have regard to whiskies which are or can be improved by other processes than mere ageing, and to invest some proper authority with powers to exempt these from the requirement as regards ageing, or to modify it, as they deem proper, after inquiry and examination.

11966. It is a request in fact that the Commission shall not shut the door to improvements more than necessary?—Precisely.

11967. (*Chairman.*) Do you know the date when those letters patent came into existence?—I do not know the exact date; it was in 1906.

11968. That is two years ago. Do you know of it being employed in any other distilleries except the one that you have mentioned?—No; experiments were made. I believe it is used at another distillery, but not on such a large scale as at the Stronachie distillery. It was merely experimentally.

11969. Has the process attracted the attention of the trade?—It has hardly had time. It is a comparatively new process, otherwise we might have asked to be allowed to request the attention of the Royal Commission to it before now.

11970. In your opinion it is a desirable thing?—Yes.

11971. At any rate it can be tested?—I think so.

11972. (*Dr. G. S. Buchanan.*) Can you tell us what you think the harshness of new whiskey depends upon, chemically?—Not particularly. It clearly does not depend on the items shown in the chemical analysis, the ethers and the secondary alcohols, because if it were so, whiskies showing practically the same composition by analysis would have the same flavour, which they really have not. There are scarcely two alike. I think Dr. Bell and Dr. Schidrowitz have expressed the opinion that it is due to some products partly produced in fermentation, and to some empyreumatic products produced in distillation. With regard to brandy, there is a flavour in brandy distinguishing it from other alcoholic liquors like whiskey, but that harshness is removed by oxidation, by ageing, and it is so with this process also.

11973. Your idea with regard to this process is that it removes that specific chemical substance or mixture of substances which gives this particular harshness?—Yes.

11974. Not that it necessarily produces the other changes which are associated with age in whiskey?—Not necessarily.

11975. I should like to know, as you have made a comparison between the six year old whiskey and the new whiskey before and after treatment, whether you think that the six year old whiskey when it was new was probably comparable analytically to the whiskey you are trying now?—I would not like to put any limit upon it. I should think that the effect would be something between two years and six years.

11976. You do not understand my point. Have they at this distillery frequently had samples of their whiskey in past years analysed?—I think not frequently. I have done it twice.

11977. I do not understand whether one might safely contrast the chemical results of a six year old whiskey with the chemical results of a new whiskey on the assumption that the six year old whiskey was originally the same?—I could not assume that the original whiskey was of the same composition. I do

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not know the original composition of the six year old whiskey, and therefore a fair comparison cannot be made. May I be allowed to put in samples?

(*Chairman.*) Yes?—I will put them in with a list if you will allow me?

(*Chairman.*) Yes.

The witness withdrew.

Mr. J. M'Callum.

Mr. John M'Callum, called.

11978. (*Dr. Adeney.*) You reside at Evanfield, Kirn, on the Firth of the Clyde, Argyllshire?—Yes.

11979. You have been a practical malt distiller for thirty years, from 1845 to 1874, both inclusive?—Yes.

11980. Where was your distillery?—The Hosh Distillery near Crieff, Perthshire.

11981. Have you had anything to do with other distilleries since you left your own distillery?—Yes, several.

11982. Will you name some?—Since I retired from the distillery I have advised and reported on various distilleries in Scotland, Ireland, Sweden, and I have been asked to go to America, and was offered a free gift of £50,000 interest in the distillery, but declined.

11983. I think you wish to make a statement with reference to the liquid that the makers use in the process of distillation?—As to the evidence laid before this Commission, all my information is that reported in the "Scotsman" newspaper, and I desire to quote some facts regarding whiskey and grain spirits.

11984. Will you quote those, please?—Mr. Tedder, Chief Inspector of Excise, reported that a declaration of the cereals was given by the distillers; that, as far as it goes, is all right; but the Excise has no declaration or authority for information as to the liquid used. If it is a liquid the distiller may add what he pleases before it passes the mash tun. On that I wish to inform the Commission, and hope your Honours will bear with me while, as concisely as I can, I relate some facts. In 1846 for a week I was residing beside Seggie Distillery, Fife, and was repeatedly in the works. One day in the warehouse, after the officer had finished with the sample of spirits I asked for to taste it. When raising the sample to my lips two of the men rushed forward towards me, one seized my arm, the other the glass, saying if I would drink that it would kill me. I replied I was not going to drink it, but just to taste it. The manager said: "Go for some water." On the production of the water I put a little in my mouth, then spat it out. I was truly thankful for the water. What I saw in the work and the tasting left an impression on my mind and made me keep my eyes and ears open ever since when anything concerning grain spirits came in my way. This probably was the cause, in after years, of my taking particular notice of the workings about grain distilleries and in conversation with those concerned.

11985. You wish to express the opinion to the Commission that vitriol was used by grain distillers? Is that so?—That is so, and I wish to explain my knowledge of it.

11986. You need simply make that statement?—As to whiskey, I hold that whiskey is the natural product of barley, malted, fermented, and distilled in a pot still, otherwise you cannot get whiskey produced; you cannot get the aroma by a patent still, and the aroma is the cream of the whiskey, the same as cream is to milk. Whiskey and grain spirits were as distinct a commodity as silver and copper, and it was illegal to call grain spirits whiskey until about 1858. Four gentlemen in Greenock were fined £450 each for substituting grain spirit for malt.

11987. By whom were they fined?—The Government—the Excise. All permits were written "Malt only," and the permits of grain spirits were written "P. S." (Plain spirits). About 1858 Somerset House requested the officers to write on all permits P. S. The malt distillers sent a petition against it, and it was restored "Malt only." In about six weeks it was withdrawn. Then a deputation went to London to show how the spurious grain spirits were substituted for whiskey. The Chancellor told them he did not care what it was made from, so long as he got the duty. That was the death knell of whiskey. A pot still is a rectifier. I have instructed gardeners to distil their herbs and roses. That could not be done by a patent still. You want the aroma, which is the cream. In 1857 a Bill was brought before Parliament to compel all grain spirits to be kept in bond for a number of years, leaving it to the House to determine the number; but three, four, and five years were spoken of as it would brand grain spirits. Grain distillers, backed by spirit dealers, got up a subscription of about £8,000 to oppose the Bill. The money was given to a London brewer, who gave it to somebody, and the Bill was rejected.

11988. Is there any other matter that you would like to mention to us?—About 1825 the Government drew a line from the Port of Monteith on the West to the coast in the East of Scotland. All distillers north of the line were not allowed to send whiskey south of the line; hence some removed to the south of the line, and were called "Lowland," north of the line "Highland." It did not last in operation very long, because they got a deputation against it.

11989. Was there a different rate of duty on each side of the line?—Those on the north were not allowed to send south of the line at all, and that was the monstrous thing.

11990. But was there any difference in the rate of duty?—From 1840 to 1853 it was 7s. 10d. in England, and in Scotland it was 3s. 8d., but that had nothing to do with the difference at that time. They drew a line, but it did not last more than two or three years.

11991. You do not think it was caused by the difference of duty?—Not at all.

11992. Is there anything else that you wish to add?—Would you allow me to say this? As with milk so with malt. With milk you produce butter or cheese. With malt you may produce whiskey, spirits, vinegar or sugar. At all these places I used to go to they used to make spirits, but they could not make whiskey, and the great material difference was in the stills.

11993. (*Mr. Guillemard.*) I want to ask you a question with regard to what you say in your *précis* at the bottom of page 1 with regard to the glass of whiskey which you thought of tasting, but which you were prevented from tasting. You draw the inference that you were stopped drinking it because it was unwholesome. I suggest you were stopped drinking it because it was 65 overproof, and probably would have killed you if you had drunk it, or even an elephant?—Yes, it was 65 overproof. I was stopped drinking it, and spat it out. I do not suppose for one moment that it was the strength that prevented me, but it was knowing the quantity of vitriol that was used. I think you should allow me to add what I know of the vitriol.

11994. What is it you wish to add?—About 1868, when in Glasgow, one day the manager of a chemical manufactory told me of the great quantities of vitriol the grain distillers were using. I questioned the amount. He at once said my friend used over 40 tons per week. Next day in the Exchange, Glasgow, I met my friend, and after inquiring for the welfare of each other, I said I had no idea of the quantity of vitriol he used until Mr. L., manager, told me he used 40 tons. He replied: "Yes, I require 45 to 50 tons weekly." That is enough to dry their throats, I think. About 1868, in Bristol, I asked a medical physician there, who had a pretty large experience, how it was that persons could drink the vile stuff that they were getting as whiskey. He replied if I was at as many post-mortem examinations as he was I would not require to ask. Their stomachs were tanned like a navvy's old boot; and many of them burst, adding, these folk would not thank me for a glass of my whiskey; they required something that would bite. The grain distillers were using vitriol so freely that they were spoiling the trade, and though the trade remonstrated, they would not yield until the Edinburgh traders combined, and built the

North British Distillery, and even that distillery, I was told, used two carboys of vitriol to the mash.*

11995. Then on page 4 of your *précis* you say: "I knew two public-houses who got a cask each of grain spirits and never got it all sold. Those who got it were so violently affected that people would not enter the house, and the publican had to give up the house." I do not want to press the question unless you wish to answer it, but could you give the names of the two public-houses where the spirits were got?—Yes, it was perfectly public. One was a man named Cameron, in Gilmerton, two miles east of Crieff. I went along there with the officer to write a request not to have it removed. The other was Miss Campbell, in Crieff, beside the "Drummond Arms."

11996. What was the date?—It would be about the 'Sixties.

11997. (*Dr. Horace T. Brown.*) I should like to ask you a few questions with regard to the use of vitriol or sulphuric acid. You have stated that you found it being used in 1868 in a patent still distillery?—In 1846. It is what happened before my eyes and ears.

11998. There is an inference to be drawn from your remarks that this vitriol got into the whiskey, and that the consumers of the whiskey were consuming the vitriol?—Yes, beyond a doubt they are put in the mash the same as water; it goes into the still, and it is there at the finish. When the North British Distillery was started they reduced the quantity very much, but the public was getting it, and you could smell it distinctly.

11999. In those days undoubtedly the grain was to some extent sometimes converted by the use of sulphuric acid or vitriol?—Yes, it was the same thing.

12000. But the sulphuric acid or vitriol was neutralised by lime or some other agent of that kind before the product went to the still, or before the product was fermented?—There is no doubt that a portion would be used.

12001. None of the sulphuric acid ever found its way into the spirit?—I have a dozen times seen coloured paper taken and put into it, and it has come out clean and pure, and all the colour on the paper had been taken out.

12002. Whatever the practice then was I think it is the fact that now no sulphuric acid is ever used for converting the mash?—That is not so; I say it is.

12003. And that even when it was it never could have gained access to the spirit?—No, I do not agree with you.

12004. (*Dr. Adeney.*) Could fermentation go on in the mash if vitriol was present in the mash?—Most decidedly, after it gets into the fermenting back.

12005. (*Chairman.*) Mr. Bramall, as you have been called before the Commission as a witness I will put this to you. Is it your view that vitriol is used now?
(*Mr. Bramall.*) No. This witness has drawn his own proof.

12006. (*Chairman.*) It is not suggested that vitriol is used now, but that it is a thing of the past?
(*Mr. Bramall.*) I had not suggested it.

12007. (*Chairman.*) Except for the interest historically it does not help us very much. (*To the Witness.*) Do you say vitriol is used now?—I believe it is.

12008. On what ground do you say that?—That they require it to dissolve the matze, and it gives them a better produce.

12009. Have you any knowledge, either from what you have observed with your own eye-sight within the last ten years, or from what you have been told, that vitriol is used at all?—Most assuredly yes.

12010. What have you seen yourself to make you think so?—I have seen it going into the distillery, and I have seen it on the premises.

12011. Within the last ten years?—Thirteen years.

12012. Where?—At Alloa.

12013. At whose distillery?—I do not like to suggest the names, but there are four or five distilleries that used it.

12014. At present you are indicting the whole of the Alloa distilleries, or throwing suspicion on the whole of them, and therefore it is only fair to them to say which one it was?—The Carsbridge and the Glen Ogle.

12015. What do you suggest that vitriol was used for?—It was used in the mash.

12016. Is it used for anything else?
(*Dr. G. S. Buchanan.*) We have seen it used at patent still distilleries for other purposes. One that I have in my mind is one that I saw in London.

12017. (*Chairman.*) What is it used for?
(*Dr. G. S. Buchanan.*) In connection with molasses spirit for methylation. They might also use it for cleaning.

12018. (*Chairman.*) Do you know that vitriol is used sometimes for cleaning purposes—the cleaning of the vats, and the cleaning of the stills?—A very small portion.

12019. The vitriol you saw there might have been there for the purpose of cleaning the stills or vats. What do you say as to that?—I say that they would not require 20 or 50 carboys of vitriol for that.

12020. Have you seen 20 or 50 carboys within the last thirteen years?—Yes, I think I have seen 20 at one time.

12021. At one distillery?—I have not counted them. They generally kept them out of sight.

12022. Did you see 20 carboys at one distillery?—I saw them on the road going in.

12023. Do you know whether they were full or empty?—They were full.

12024. How do you know that, if they were kept out of sight?—They were not out of sight when I saw them. A practical man knows the difference between an empty carboy and a full one.

12025. How do you know at all an empty carboy from a full one if you only saw them and did not go near them?—When they are full they are on their bottoms, and when they are empty they are on their sides, one above the other sometimes. When they are full they are properly arranged.

12026. What do you say is the effect of the vitriol that they put into the whiskey? In the first place, for what purpose is the vitriol put into the mash?—They find it beneficial for giving the produce. I never studied it.

12027. In what direction is it beneficial?—For making it into sugar, and increasing the liquid after it is distilled.

12028. What effect does vitriol have on the consumer if it is put into the mash?—It burns his throat and his stomach, and acts on his nerves.

12029. The consumer would find it out in a moment, would he not?—They began with a little and a little, and now they get it altogether.

12030. The consumers would know that the vitriol was there?—Yes, I believe they do. There is no mistake about it.

The witness withdrew.

Mr. John Hyland, called.

12031. (*Dr. Adeney.*) I believe you have had 35 years' experience in the spirit trade?—Yes, all my lifetime, since I was a boy. I was 35 years connected with the business, and my business takes me all over Ireland. I am connected very closely and intimately with the best of the wholesale and retail trade, and therefore I am conversant with the opinion of the dealers—the traders throughout Ireland, particularly in the three provinces Leinster, Munster and Connaught. In the province of Ulster our firm does not do much business. I am intimately acquainted with what the traders think about this

* With regard to this statement the following letter has been addressed to the Commission by the North British Distillery Company, Limited—"Dear Sir,—The report in the *Scotsman* newspaper on Wednesday of the evidence given before the Commission on Tuesday, the 23rd inst., by Mr. John M'Callum contains a statement by him to the effect that this Company used vitriol in the manufacture of whiskey. This we most emphatically deny and beg to state that vitriol has never been used by us nor have we had it within our premises. We have written to the *Scotsman* to the same effect and trust that this will be laid before the Commissioners. Yours faithfully, etc."

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whiskey question, and they are clearly of opinion, as I am, that Irish whiskey can only be produced in a pot still in Ireland. Irish pot still whiskey must be made in a pot still and the materials that are used in the composition of a genuine Irish whiskey should be Irish grown and the materials should be barley malted or unmalted, wheat, oats and rye.

12032. You would exclude maize?—Yes, I would exclude maize. The opinions of my friends in the trade wholesale and retail is that Irish whiskey cannot be made from maize.

12033. Are your firm distillers?—No, we are agents.

12034. Are you blenders?—No, we tried blending once, but with disastrous results. We were agents for provincial distilleries in Ireland, and at the time we were selling their whiskies we tried to bring the prices down and tried a blend, but it was disastrous. It did not please our customers, we lost our customers and we did not try the experiment again.

12035. Where are your offices?—Lower Abbey Street, Dublin.

12036. Have you any knowledge of Scotch whiskey?—Not any extensive knowledge. There is very little Scotch whiskey sold in Ireland. We do not handle it except as agents.

12037. I understand from you that you have experience all over Ireland?—Yes, we have.

12038. Does that include the North of Ireland?—Very little. We do not go North of Dundalk. We did business in Belfast at one time, but it was not in whiskey.

12039. In the South of Ireland your experience goes to show that pot still whiskies only are sold?—That is our experience.

12040. By your firm?—Yes, to general consumers. My experience of the trade throughout the country is that it is mainly pot still whiskies that are sold, and all the whiskies that are sold throughout the district we cover are pot still. There is no good trader who will ever have patent still. On the contrary, a trader who is supposed to sell patent still whiskey is shunned. We ourselves, as business people, if we learn that a man has begun to sell patent still whiskey in Ireland begin to doubt his solvency. It is only a very small trader or a very poor trader who will resort to this and this is because he is unable to buy pot still.

12041. Do you yourself know anything of the Irish patent still whiskies?—No, we have no personal knowledge except of seeing them on sale.

12042. Do you know them by taste?—Certainly. We always store them for fortifying purposes—for fortifying wines or cordials.

12043. (*Dr. G. S. Buchanan.*) Were those spirits that you bought for fortifying the same as the Irish spirits that are sold for blending with whiskey?—The same. We got them at high strength, 68 over proof, as high as we could get them, and they were useless to us except for fortifying.

12044. (*Dr. Adeney.*) Would you mind giving us some idea of the extent of your sales in whiskey annually?—As agents we sell a great deal of John Jameson's, Power's, Roe's, and D. W. D.

12045. To your knowledge is patent still sold in Ireland?—To our knowledge it is sold surreptitiously.

12046. I do not mean to the retailer, but in the trade?—It is sold. We used to use it for fortifying purposes.

12047. How is it designated? Is it called "whiskey"?—No.

12048. What is it called?—Grain—patent still.

12049. I gather from you that there is a real prejudice in the South of Ireland and Dublin against patent still?—Yes, there is in the retail trade generally.

12050. The public would not buy it if they knew it was patent still that was being offered to them?—No, the consumers would not take it in the district we cover. They are all under the impression when they ask for "whiskey" that they are getting pot still. That is the general opinion of the consumer as far as we know from our experience which is very wide.

12051. Your suggestion is that any retailer who commences to sell grain spirit does that for financial purposes?—Yes, exclusively.

12052. Have you any objection to patent still spirit so far as its effect on the consumer is concerned?—I think so.

12053. What is your objection?—From personal experience as a Poor Law Guardian and as Chairman of a Poor Law Hospital Committee, I know that there were radical changes made in the method of nursing that brought me in direct contact with the doctors and nurses and the relieving officers and the patients. In the cases of extreme illness arising from intemperance the opinion of those officials was that it was the bad whiskey that these unfortunate people took, because they were unable to buy good whiskey.

12054. Had they real grounds for their opinion, or do you think that it was prejudice?—The evidence of this doctor, which was skilled evidence, and my own practical knowledge of the district from which those unfortunate patients came, led me to believe that it was the bad whiskey that they had got in shebeens.

12055. You are referring to patent still?—Yes, my belief is that it is the patent still whiskey that is sold in those shebeens.

12056. (*Mr. Guillemard.*) It was the opinion of everybody that it was bad whiskey, and when they said that they meant that it was patent?—Yes, as far as their knowledge went, and to my knowledge personally.

12057. (*Dr. Adeney.*) It was you who translated the bad into patent?—Yes, it was I.

12058-59. I take it from you that you really have made no direct experiments upon which you ground that opinion?—As a business man, as a dealer, as a traveller, and as an agent, I am giving you my own opinion fortified by my customers throughout the three provinces, and also the wholesale trade in Dublin. In Belfast the wholesale trade are organised, but in Dublin we are not so advanced. I am free to say, having consulted with my fellow traders and customers in town and country, that they are of opinion that patent still is not whiskey.

12060. You probably, coming from Ireland, have seen something of Fair life in Ireland?—Yes.

12061. And something of the intemperance that sometimes unfortunately occurs there?—Yes. When I was a boy it was a well understood thing that people who got temporary licenses at those Fairs supplied the worst possible drink, but I am glad to say that owing to police supervision, and through organisation in Dublin, and the great attention that this matter excited, that kind of thing has long since disappeared. If there is any intemperance now in Dublin it is undoubtedly due to the selling of new whiskey.

12062. And not necessarily doctored whiskey so as to give it a "bite"?—I think there is very little of that sold.

12063. Have you any other reasons for objecting to patent still spirit being sold as whiskey besides those which you have just given us?—As a business man in Ireland I think it is a national loss that so much spirit should be manufactured from foreign materials. Irish agriculture is in a very poor way. Irish trade depends upon agriculture, and if all this spirit that is made from maize was made from Irish grown materials, barley, oats, and wheat, it would add vastly to the welfare of the country at large.

12064. So that it is upon the economic effect upon the agriculture of the country that you base your opinion?—That is one of the grounds, and also that patent spirit as used in Ireland, which is quite distinct from Scotland, has never been stored in Ireland. The popular belief amongst my friends in the trade is that it does not improve by maturing, and therefore it is not stored. It does not pay to store it.

12065. Can you state as a fact that patent still spirit is not now stored in Ireland?—Not to any extent.

12066. I have seen patent still spirits of four or five years old in Ireland?—It is not stored in the same way that pot still makes of spirits are. I have no doubt that the distillers find it useful to store some patent, but it is not stored on the large extensive scale that pot still is stored. It is not stored as an investment, consequently the patent still that has been used in

the export trade in Ireland is all new, and my belief is that this new patent spirit is highly injurious.

12067. Do you know anything of the blending trade that is going on in Dublin?—Yes. Of course every trader knows of it. We know there are houses engaged in the export whiskey trade in Dublin blending whiskies there.

12068. (*Chairman.*) Which whiskies?—Patent still and pot still. I believe the decline in the Irish whiskey trade at large is due within my experience of 25 years to the inferior name that Irish whiskey has got through England, and this injurious reputation has occurred through the blending of patent with the pot still.

12069. (*Dr. Adeney.*) You have no knowledge of the fine art of blending in Ireland that has been established in Scotland?—No; I do not think it exists to the same extent in Ireland. To begin with, we have not the same number of distilleries, and therefore not the same variety of makes. I know certain traders in Dublin used to blend pot still whiskies with great benefit. A few of them do it still, but they are declining in number. The great bulk of trade in Ireland is going into self-whiskies. Jameson, Power, Cassidy, and others are largely going into consumption as self-whiskies, and blending is disappearing in Ireland except for export trade.

12070. You have no hesitation in stating that the reputation of Irish whiskey has grown up on these pot still whiskies that you refer to?—Yes; and that that reputation has been injured in England.

12071. The reputation of Irish whiskey has depended upon the quality of those whiskies?—Unquestionably. We believe in Ireland that the best whiskey in the world is made in Ireland. That is the experience of experts in the trade.

12072. (*Dr. Cushny.*) You believe that new whiskey is especially deleterious to the drinker?—I do personally believe that from my own experience having tasted it and seen the results of it.

12073. What results have you noticed yourself from new whiskey that you did not notice from old?—I think it is more inflammatory—more exciting to the brain and the nerves.

12074. What did you notice exactly? What were the symptoms of inflammation?—I cannot give scientific information except my own common sense.

12075. I want you to give us what you saw as to your own case?—I have only made an experiment, and I have found it impossible to drink it. You cannot drink new Irish pot still. It goes down one's throat like fire. You can drink new patent still better because there is a certain smoothness about it, an oiliness, and it is not so fiery.

12076. Did you make those experiments on yourself?—Yes.

12077. Did you notice any bad effect?—Yes, certainly. I noticed my head more injuriously affected after new than after old, very much.

12078. You found that it was more intoxicating?—Yes, I found it was more intoxicating, and more exciting, and gave me a bad headache. That was after drinking new spirits.

12079. You found that more with patent than with pot still?—Yes. Good old pot still does one good.

12080. Does it tend to cause headache, do you think?—If taken to excess.

12081. But you can take more of it than of new patent?—Unquestionably. You can take a good old pot still whiskey of any make with advantage.

12082. You have noticed that a worse form of drunkenness occurs from the use of patent still whiskey?—That is my personal belief as one acquainted with the habits of the people, and what goes on around me. Extreme drunkenness is accompanied with violence, and this violence arises from drunkenness during prohibited hours in shebeens. Shebeens are worse than low public-houses. The poor people in Dublin drink mostly this patent spirit. The people are not able to pay for very expensive drinks. Dublin is a very poor place. There are about 8,000 pauper inmates in the workhouses, almost as many on official out-door relief, and a very much larger number of poor on relief from charitable societies. There are at present in Dublin over 20,000 families living in one single room each as their home.

12083. You have very little experience of what the effect of pot still whiskey would be on the poor population of Dublin, I think?—I have. I know many working men who are temperate, steady men, who take their share of good drink in a respectable way.

12084. You have very little experience of what the effect of good pot still whiskey would be on the poorest and roughest population of Dublin?—On the contrary, I have a close knowledge. I am a member of a Dublin charitable society, and we visit the poor in their homes, and in attending to those cases of want it comes under my notice as a matter of common sense that want and poverty arise from intemperance, and that this intemperance arises from drunkenness that is caused through drinking bad whiskey. I maintain that the bad whiskey is the cheap patent still whiskey.

12085. What I want to make out is whether you can give any definite evidence as to that number of poor people in Dublin who drink pot still where there is no particular violence and crime resulting, and contrast those with the same number of people who take patent still?—It would be difficult to make that selection.

12086. Can you give us evidence with regard to this point?—I can give my personal experience and observation.

12087. You have no experience except on one side?—We visit the poor.

12088. Can you give us evidence of where the pot still is used in preference to the patent still for the treatment of mental diseases?—A gentleman who has just recently died, the Resident of the Richmond Lunatic Asylum, Dublin, Dr. Conolly Norman, removed patent still whiskey from the list of his supplies, and used pot still instead.

12089. Did he use much whiskey for his cases?—I do not think so. I do not know the exact quantity. They only use it there for specific cases. He was not at all favourable to the use of alcohol, and to my personal knowledge he removed the patent still from the list of supplies and substituted pot still. The quantity used was some casks in a year. I am quite sure of that.

12090 (*Dr. G. S. Buchanan.*) Are you aware if Dr. Conolly Norman ever wrote on the subject at all in a medical paper?—No. It only came under my notice as a matter of business. We were applied to for the whiskey.

12091 (*Dr. Cushny.*) This is largely hearsay knowledge?—No. A customer of ours tendered for the supply of pot still whiskey, and he asked us to give him the whiskey.

12092. But you have no knowledge of why it was changed?—No, I merely state the fact.

12093. It may have been that Dr. Conolly Norman consulted his patients who wanted a better tasting whiskey than the patent still?—I am unable to give you evidence with regard to his motives.

Adjourned for a short time.

(*The Witness.*) There is one thing I wish to explain. I have personal knowledge of the results of drinking good whiskey by the poor. In my own parish where my office is situated there is an organisation which numbers over 800 working men who are all sober men, but few of them are teetotalers. The attendance is extremely large, and it fills the church. I should say the average attendance is fully 90 per cent. all the year round. They are all working men, and sober men. They all get good honest Dublin whiskey, and the result is that they enjoy themselves. I think there are twenty-three parishes in Dublin. In Rathmines, where I reside, there is an organisation, but not so large, and the same result is obtained. In Rathmines there is a temperance organisation composed of the working men of the parish, which is also very small in number. These men are not teetotalers but sober drinkers.

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12094. (*Dr. Cushny.*) Do they drink as much pot still whiskey as those drunkards do?—These men are not drunkards. They are sober, moderate drinkers.

12095. (*Mr. Guillemard.*) You told us that you come here as a business man, and I take it that you are prepared to substantiate these statements which you make in your *précis*, by which I mean you have something to go on as evidence of the statements you make. I should like to ask you a question continuing the line Dr. Cushny has taken. I want, if I might suggest it, that you should give me quite short answers to my questions. You say in your *précis* that as a Poor Law Guardian, and a member of a charitable society, you are aware that the worst forms of drunkenness with resultant violence and crime might easily be traced directly to the use of new patent spirits. What direct evidence have you of that?—My own experience.

12096. Your experience to prove anything must be that you are acquainted with an individual, that you know that he has indulged in violence, and committed a crime, and that you know he was brought to a state to commit that crime by drinking new patent spirit. You have to know all those facts about that individual before your evidence is of any value. Do you possess any such knowledge?—Only a general knowledge.

12097. Have you any knowledge of one individual with regard to whom you can say that?—I think so. I have my own experience of visiting the poor in their homes.

12098. Then you make a similar statement with regard to Dublin which happens to be a city I know pretty well. Can you give any definite instance? Can you give us an instance of a person and of a particular crime that he committed?—Not for the moment. I am quite clear about the matter from my own experience.

12099. Could you reflect on the matter and send it in writing to the Commission?—Yes, I think so.

12100. What the Commission feel is that perhaps your statements here would carry more value if you could produce some facts to support them?—I could if I had an opportunity of going back on the books of our organisation.

12101. You would then be able to send something in writing to the Commission?—Yes.

12102. We will leave it at that. Then with regard to Dublin. You have committed yourself to this statement, and I should like to know if you really wish it to go on the Notes as your considered opinion. These are your words: "If there is any intemperance now in Dublin it is undoubtedly due to the selling of new patent whiskey." That statement amounts to saying that no drunkenness in Dublin is due to pot still whiskey. Do you seriously wish that statement to be put on the Notes?—Not in that form.

12103. You made it in those words?—That is a misapprehension I meant drunkenness accompanied by violence.

12104. Do you wish this should stand on the Notes as your opinion: "If there is any intemperance in Dublin which takes the form of violence it is due to indulgence in patent still whiskey, and none of it to indulgence in pot still whiskey"?—No, not so far as that. That would be an extreme statement that would not be accurate.

12105. Then your qualification that in referring to patent still whiskey you had in mind only drunkenness leading to violence carries no weight. Do you admit that?—No, I do not.

12106. When you get to the possibility of lunacy following from indulgence in drink you say in your *précis* that an acknowledged authority on mental diseases, discovering patent still spirit in an institution he was connected with, at once stopped its use and got pot still whiskey instead. I do not think the authority you are referring to can be Dr. Conolly Norman, because you mention him again three lines later on in your *précis* in a different capacity. Could you tell the Commission who is the acknowledged authority on mental diseases who took the action that you refer to?—I refer to Dr. Conolly Norman.

12107. Then you go on in your *précis* to say: "As used in Ireland the new patent spirit is held to be responsible for the increase in lunacy by such authorities as the late Dr. Conolly Norman, of Richmond Lunatic Asylum, Dublin." Has he ever stated in writing that he attributes the increase of lunacy to a spirit that is both patent and new, or have you merely some vague memory that he did not like the patent spirit?—I have a recollection of a statement over his name in print in which he attributed the lunacy in Ireland to drinking new bad spirits.

12108. Your statement is: "New patent." Do you wish to add the word "new bad"?—Yes. That is the impression he conveyed to me.

12109. Did he also convey the impression that though this result followed from patent spirit it did not follow from the use of new pot or old pot? Did you gather that from what he said to you?—I did, because from my knowledge of the business it is impossible to drink new pot still.

12110. Is there any record of what passed between you and him? Did he ever put his views into writing in any form?—I think I read them in some print.

12111. The Commission would find it most valuable if you could look up the reference in print and furnish it to them?—I think that is possible.

12112. You say in your *précis*, "It"—that is new patent spirit—"is undoubtedly responsible for drunkenness," and you imply that pot still spirit is not. I may mention that of the numerous witnesses before this Commission hardly anyone has expressed so definite a view. May I ask whether you have anything direct on which you found so very definite a statement?—My experience of the trade in Ireland going amongst the licensed trade closely for years.

12113. Experience, to be of any value in this connection, must be that you observed an individual before and after he did something reprehensible, and that you can connect his action with the fact that he has taken new patent spirit. Have you any real instance of that that you could let the Commission know?—Not so closely.

12114. (*Dr. Horace T. Brown.*) You speak in your *précis* of the superiority of whiskey made from Irish grown cereals?—Yes.

12115. Can you distinguish between whiskey made from Irish grown cereals and whiskey made from materials grown out of Ireland?—I think it is possible, because we know of cases where distillers in Dublin made almost all their whiskey from foreign materials; the whiskey was wrong, they lost their business, and they had to close.

12116. You say in your view foreign grown grains distilled in a pot still in Ireland will not give the same article exactly?—That is our belief.

12117. Is the difference such that you could distinguish them?—Yes, side by side, I think it could be possible for an expert to distinguish them. There is a delicacy of flavour and aroma with the home grown that you do not get in the foreign.

12118. You said that, in your opinion, the Irish whiskey trade has been to a large extent destroyed by the practice of blending?—I think I said "injured."

12119. At any rate, it has been much influenced for the worse by the practice of blending?—Yes.

12120. Does it not strike you as a curious fact that the Scotch distillers, almost all of them, consider that the popularity of Scotch whiskey is due to this very same blending which you condemn?—I am aware of that, but the circumstances are entirely dissimilar.

12121. How do you account for that?—In the dissimilarity of the different makes. The Irish pot still is so made that it comes out lighter than the Highland malt whiskey. Highland malt whiskey is heavy. Irish pot still is not heavy; it is lighter in itself, and it is not capable of improvement by adding any patent to it.

12122. Do you not think the decrease in popularity of Irish whiskey may be traceable to some other cause than the blending?—I am unable to think of any cause so effective as the blending.

12123. (*Chairman.*) I understand you to say, speaking positively, that a good deal of the intemperance, or call it drunkenness, accompanied by violence and other evils, is due to excessive drinking of new patent still whiskey?—I do.

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12124. The Commissioners agree with you that any excessive drinking of spirit may produce those results, may it not?—Yes.

12125. Your evidence to be of any value must go to the extent of showing that, if a person had drunk the same quantity of pot still whiskey of the same age as he drank of patent still whiskey, he would not commit these crimes, and would not be intoxicated. Is that your position?—It is.

12126. Now let us test it. I want you to give us any case in either general or specific terms of two persons, one drinking a quantity of patent still whiskey and the other drinking the same quantity of pot still whiskey, both whiskies of the same age, where one became drunk and the other remained sober?—I cannot give you an instance in that form.

12127. In what form is it? You are asked to bring home the statement that you have made?—My experience of drunkenness in Dublin is that it is mainly due to drinking at late hours in shebeens—illicit drinking.

12128. We know that when a man drinks whiskey, brandy, gin, or rum to excess at early or late hours he gets drunk, and that is an evil. What I want you to give me if you can is any instance of cases where one man has drunk a certain quantity of patent still whiskey of a certain age—never mind what age—and another man has drunk the same quantity of pot still whiskey of the same age, and one has become drunk and the other remained sober?—I could give you no instance of that. I have no experience of that.

12129. Then on what is it you base your general statement, that patent still whiskey is answerable for the crime of drunkenness in Ireland?—That is our belief in Dublin.

12130. I want the facts upon which you base that belief. What is it that you, as a man of business, coming here to give evidence, base your statement upon?—We see drunkenness around us in Dublin, and it mainly arises in certain districts from the night houses—illicit houses; in those places they sell the cheapest and worst whiskey they can get.

12131. Is your knowledge geographical? Is it that in certain districts in Dublin there are houses that sell nothing but patent still whiskey?—I do not think so.

12132. Then if it is not so, if they are selling both kinds of whiskey, why do you trace the drunkenness to the patent still whiskey and not to the other kind?—The drunkenness arises in those other houses.

12133. Do they not sell both kinds of whiskey?—I do not understand clearly.

12134. Are there, to your knowledge, houses where they sell nothing but patent still whiskey?—There is no such house in Ireland.

12135. If that is so, how do you know that because those houses exist in the district that drunkenness and crime result from drinking the patent still and not the pot?—In those houses they get this cheap whiskey, and drunkenness results in those irregular houses and shebeens—they get the patent whiskey. They buy the cheapest whiskey and sell it, and it produces this violent drunkenness. It is the cheapest whiskey they can get.

12136. Why do you say that is patent still and not pot still?—I presume it is the patent still.

12137. That is presumption?—Yes.

12137*a*. You say there is no house in which only patent still is sold?—I think the night houses sell nothing else.

12138. Do you know of them?—Yes. I know they exist in Dublin.

12139. In the first place, you attribute this drunkenness, violence, and crime to the patent still whiskey?—Yes. In certain well-known districts in Dublin where the irregular characters live.

12140. Where are they?—In the low neighbourhoods.

12140*a*. Will you give us the name?—In the neighbourhood of Mecklenberg Street.

12141. Is it your idea that in such district the public-houses are selling——?—No, not the public-houses.

12142. What are they?—Illicit houses—shebeens.

12143. Do they escape the observation of the police?—No, they are constantly brought up and fined.

12144. You know of them?—Yes.

12145. And the police know of them?—Yes, the police know of them, and they try to suppress them.

12146. Why do they not, if this patent still is so bad, get the cheaper class of pot still whiskey?—They buy the very cheapest they can get in Dublin, and that is patent.

12147. If that is so, and they get down to that, is it not wretched low class stuff?—There is no pot still in Dublin of that low class.

12148. If you get down to that price must it not be a very very inferior article?—It is.

12149. Are you not proceeding upon the inferior kind of patent still whiskey rather than fair patent still whiskey?—Yes, I think so.

12150. You attack the general character of patent still, and now it is brought down to the fact that what may have been complained of is the inferior low class quality of that particular class.

12151. (*Dr. Adeney.*) What is the minimum age of pot still whiskey sold in Ireland in the poorer districts?—The average?

12152. Yes?—The average is about four years.

12153. Nothing less than four years?—Very seldom under four years.

12154. Can the ordinary working man afford to pay for pot still whiskey of that age?—Decidedly. He would get very good pot still whiskey for 3½d. per glass in the average public-house all over Ireland.

12155. (*Dr. G. S. Buchanan.*) What is the measure of the glass?—Eight of them go to a pint.

12156. Then it would be 3½d. for ¼ of a pint?—Yes.

12157. The ordinary strength?—Yes, the ordinary strength 25 u.p.

The witness withdrew.

Mr. J. C. L. Peters, called.

Mr. J. C. L. Peters.

12158. (*Mr. Guillemard.*) I think you are managing director of Messrs. John Crabbie & Co., rectifiers and wholesale whiskey merchants, Leith?—Yes.

12159. You have been in the trade for upwards of 30 years?—Yes.

12160. I gather that to-day you come before the Commission not so much as a whiskey merchant but as a rectifier?—That is so.

12161. You wish to give evidence with regard to sections 69 and 74 of the Spirits Act of 1880?—Yes.

12162. Section 69 of the Spirits Act of 1880 says: "A distiller or rectifier may, in accordance with the prescribed regulations, and on giving to the proper officer, or the authorised officer of Customs, one day's notice, add any sweetening or colouring matter, or any other ingredient, to any spirits warehoused by him in an Excise or Customs warehouse." That is an operation which is allowed to be done in bond on spirits for export, but not on spirits for home consumption?—That is so.

12163. Certain witnesses who have appeared before the Commission have suggested that that permission to do these operations in bond for export should be repealed?—Yes.

12164. You come, I understand, to combat that view?—Yes.

12165. Will you kindly tell the Commission your opinion on that point?—The rectifiers of Scotland find it absolutely necessary for their business that they should be allowed to add colouring or sweetening

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matter and other ingredients to spirits in bond for exportation in the shape of cordials and sweetened gin and bitters of all kinds.

12166. Why do they have to add that in bond?—On account of the duty.

12167. With whom do they compete in the foreign market? Would it be the foreigner?—Yes, I should say so.

12168. You mean if they were not allowed to do it it is possible they might be cut out by people doing these operations in foreign countries?—Yes, I think so. We had a meeting of rectifiers, and that was the opinion.

12169. Was your meeting the result of the evidence that you saw that has been given before this Commission?—It was. At that meeting all the rectifiers were present.

12170. All the rectifiers?—Yes, so far as we know.

12171 How many of them?—Six—that is all the principal rectifiers. I do not know whether there are any others or not.

12172. Does that represent a very big trade?—It was estimated at the meeting that it represented a trade of 200,000 to 300,000 gallons a year.

12173. Would you like to put it in that form, or would you wish to make that statement more elaborate?—I do not think so. That was the estimate at that meeting.

12174. That is the trade in Scotland only?—Yes, the trade in Scotland only. We do not know about the English trade.

12175. These six people who deal with the trade in Scotland practically represent the interests involved?—Practically they do.

12176. Perhaps you would go on with your explanation of how the repeal of that permission would affect you injuriously?—We think it would affect us injuriously on account of the fact that we would have to use duty-paid spirits in the manufacture of our goods, and if other countries had other privileges they would cut us out.

12177. (*Dr. Adeney.*) Is your foreign trade a large one compared with your home trade?—Yes, it is a very large trade.

12178. (*Mr. Guillemard.*) Do you remember that certain blenders who came before this Commission thought that the removal of this privilege would be an advantage to themselves? Do you see how that would be so?—I do not see how that could be so, as spirits treated in that way cannot be exported as whiskey.

12179. (*Dr. G. S. Buchanan.*) Would you explain how that happens?—According to the Excise laws all the casks must be marked as "compounded spirits" or as "mixed spirits."

12180. Does that hinder the exporter from representing that his cask contains Scotch whiskey when he sends it away?—Yes, because it is marked on the casks.

12181. (*Dr. Cushny.*) What is marked?—Either the words "British compounds" or "mixed."

12182. (*Mr. Guillemard.*) Neither of which could be mistaken for whiskey?—That is so.

12183. Have you put forward your case on that point, do you think? Have you anything else to add?—Yes. We wanted to let the Commission understand that some section of the trade did take advantage of that clause in the Act, and it was very important for their interests that it should be continued.

12184. Have you any knowledge of the extent of the trade in England or Ireland?—I do not know what the extent is in England or Ireland.

12185. Do you know whether the rectifiers in England or Ireland are taking any steps to let it be known what their views are?—I do not know if they have been aware of the fact that this is before the Commission. They may not be aware of it.

12186. Do not people in the trades interested read the evidence? They are expected to?—I think there is a general impression among a lot of people that it only applies to whiskey, and they are paying no attention to it. If their attention were drawn to it, no doubt they would take steps.

12187. I have no doubt that your evidence will now call their attention to it?—Probably it will draw their attention to the fact.

12188. Now a question with regard to one or two other points that are not in your *précis*. I should like to ask your opinion as to the effect of the suggestion that has been made by many witnesses that there should be allowed a compulsory period for the ageing of spirits, and that no spirits should be allowed out of bond under a certain age. That, I can see, possibly might affect you from a rectifying point of view?—Yes, from a rectifying point of view we think that some arrangement should be made for spirits being got out of bond earlier because no improvement would be made in the spirit by keeping it.

12189. In other words you ask if the Commission recommend an age limit that spirits destined for rectification should be exempted from it?—Yes.

12190. Mainly on the ground of cost to yourself?—Yes, and that there would be no improvement of the spirit by keeping it.

12191. In other words that there would be no justification for keeping it?—Yes.

12192. There was another point raised, namely, the question of the mixing of foreign and British spirits in bond for export. That is done for export but not for home consumption. Have you any knowledge of that?—I have no personal knowledge, because as far as I can ascertain it is not done in Leith, but I know it is done in the shape of mixing.

12193. In Scotland?—Yes.

12194. Do you know if the trade amounts to anything considerable?—Yes, to a fair quantity. I should say possibly as much as the compounded spirits.

12195. Do you know at all what, as a rule, are the spirits that are mixed? I am asking you, but perhaps you do not know for certain?—British spirits mixed with rum.

12196. Where do they go to?—They go to various countries, principally Queensland and West Africa, I think.

12197. For native consumption?—I do not know.

12198. Do you know what they go out as?—As British rum.

12199. They go out mixed?—Yes, but it is marked "British rum" as well.

12200. It is British rum? When you add "British" to the word "rum" is that meant to be praise or condemnation applied to "rum"?—I do not know personally. It is made to suit certain markets.

12201. You think possibly there is a considerable trade in the mixing of British and foreign spirits in bond for export?—One of the members of the meeting stated that that was so.

12201*a*. At your meeting?—Yes.

12202. The Commissioners have had no evidence on that. There has been a demand made that that privilege should also be taken away, and we have heard no evidence against it?—The member informed us that there was a considerable trade in the mixing of British and foreign spirits in bond for export, and it was required for Australia that it should be marked "Product of Great Britain and West Indies."

12203. Did that satisfy the Australian requirements?—Evidently.

12204-5. (*Dr. G. S. Buchanan.*) The objection that has been made here to continuing the practice of allowing sweetening or colouring matter to be added, and the other objection to allowing British and foreign spirits to be mixed in bond has been made entirely on behalf of the whiskey trade?—Quite so. If anything can be done to protect the whiskey trade in that way, while also protecting our interests we are at one because we are all largely interested in the whiskey trade.

12206. The whiskey people found themselves in a difficulty because this power to mix in bond for export was used against them in connection with foreign food laws, especially by the United States?—Yes.

12207. The whiskey people have told us that they never make use of this privilege?—That is so.

12208. Do you know of their making use of it at all?—I think it is never made use of as regards whiskey.

12209. So that really the difficulty to a large extent comes from the fact that all these spirits are classed together officially for Excise purposes as "British plain spirits"?—Yes, that is so.

12210. If there was a compartment of the "British plain spirits" called "whiskey" and the difference as regards the addition of sweetening or colouring matter in bond or the difference of mixing British and foreign spirits in bond was confined to the whiskey, you would have no objection as a rectifier?—None whatever.

12211. As regards rectifying, what is your material for rectification ordinarily in Scotland?—Spirits got from the distillery.

12212. That is to say grain whiskey?—Yes.

12213. Do you buy exclusively from Scotland? Is it the practice of rectifiers in Scotland to buy grain whiskey only from Scotch firms?—So far as I know.

12214. That is a matter of convenience, I suppose, rather than anything else?—Quite. We would buy English or any spirits for rectification.

12215. (*Dr. Adeney.*) It is a matter of price, I suppose?—Entirely.

12216. (*Dr. G. S. Buchanan.*) For your purposes—for rectifying purposes—it is desirable to get the spirit new?—Yes.

12217. At least there is no object in having an old spirit?—No.

12218. Your only objection, as I gather, to a compulsory period of maturing for whiskey is that it might operate, if there was not some safeguard, prejudicially to the rectifier by making him have to buy two-year-old spirit?—That is the only objection.

12219. If that were met, you would have no objection?—None whatever.

12220. Would it be possible to earmark spirit in any way that was required solely for rectification, for example, to colour it?—I do not know. I am afraid it would be rather difficult.

12221. I did not quite understand you with regard to the exporting of whiskey. If you export whiskey or if you export a spirit which is a compound of British and foreign spirits it must be marked "compounded." Is not that so?—Yes, or "Mixed."

12222. Supposing a man were sending out whiskey that had been mixed with foreign spirits would there be anything to prevent his invoicing that to his customer in America, we will say, as Scotch whiskey? On the cask it is marked as compounded or mixed, I understand, but can he invoice it to his customer or mark the cask in any way as Scotch whiskey?—He cannot mark the cask in any way.

12223. He can invoice it as he likes?—Anybody can do that.

12224. In the same way with regard to British rum that you were telling us about. Is "British Rum" marked on the cask when it goes out to Queensland, for instance?—So I was informed at the meeting by one of the members who sends it out. I have no personal knowledge of it.

12225. He is allowed or required to mark British Rum?—He is required to mark British rum.

12226. And if he says "Produce of West Indies and Great Britain" or "Scotland"?—No, in fact they would not allow "Scotland" and they changed it from "Scotland" to "Great Britain."

12227. May he mark on the cask "The produce of the West Indies and Great Britain?"—Yes, he does that to meet the Australian laws.

12228. There is no objection made to that?—I understand not.

12229. Can you tell me whether in making cordials and articles of that kind grain spirit is ever used by itself without rectifying?—I cannot tell you. As far as I am aware it is not.

12230. We had some evidence that grain spirit was used, for example, by manufacturing chemists?—I think it is all rectified spirit that they use.

12231. We had one witness who gave evidence to the effect that grain spirit was sold direct without rectification to manufacturing chemists?—It may be.

12232. I wondered whether that was in your experience?—No. We sell chemists rectified spirit always.

12233. (*Dr. Adeney.*) You sell whiskey, do you not, as well as rectified spirits?—We do.

12234. Do you sell patent still spirit as whiskey?—We sell blended whiskies.

12235. Do you use the same class of patent still spirits for blending as you do for your rectifying business?—No.

12236. Could you tell us what class of grain spirit you use for your rectifying business?—We use the cheapest spirit we can get. It does not really matter to us in a sense.

12237. Is that the product of yeast distilleries, do you think?—I cannot tell you.

12238. You cannot give us that information?—I cannot tell whether it is the product of yeast distilleries or not.

12239. (*Dr. G. S. Buchanan.*) The spirit that you use for rectifying is from the same distillery as that from which you get spirit for mixing the whiskey? It might not be the same whiskey with regard to age, but I understood from you that it is the same whiskey as regards its origin from a particular distillery?—Yes, the distiller sells for both purposes, but whether they make it from the same material or not I do not know.

12240. (*Dr. Adeney.*) They sell at different prices?—Yes.

12241. For blending purposes do you take care that you get a spirit wholly produced from malted cereals?—We believe it to be.

12242. You wish it to be?—Yes, we wish it to be.

12243. But you are not concerned as to what are the materials used before the spirits are used for rectifying?—No, it does not matter, because the rectifying process takes everything out of it and leaves it as near as possible only alcohol.

12244. You are not a distiller?—No.

12245. You cannot tell the class of distillery from which the class of spirit you use for rectifying comes?—No.

12246. You regard it as too poor a quality for blending with your whiskey?—We do.

12247. Have you any reason to believe that that whiskey that you use for rectifying is sold in the market as whiskey?—I have no reason to believe it to be. I do not know.

12248. (*Dr. G. S. Buchanan.*) I will put to you a concrete instance. Would you, for instance, buy a grain spirit for rectifying from the Distillers Company or from the different distilleries of the Distillers' Company?—Yes.

12249. From one distillery or another owned by that company?—Yes, from any distillery they like to supply it from.

12250. Or from either of the other patent still Distillery Companies that there are in Scotland?—Yes, or in England.

12251. You do not specify in those purchases that it is specially for rectification?—Yes, we do.

12252. Do you understand from that that there is any special method of preparation of the spirit for your own purposes?—I think it is quite probable that they make it in a cheaper way, or something of that kind.

12253. (*Mr. J. Y. Buchanan.*) I suppose the patent still distillery supplies to you the spirit almost direct from the still?—Quite.

12254. Because that is the cheapest way of getting it?—That is so.

12255. Then you rectify it, and all you want to get out is the alcohol?—Yes, that is so.

12256. And from that you make the product known in the Pharmacopœia as rectified spirit?—Yes.

12257. What is the strength of rectified spirit?—About 66 o.p.

12258. Then it has quite the same value wherever the spirit comes from? It might be foreign spirit?—Quite so.

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12259. There is no reason why it should not be if it is cheaper?—None whatever.

12260. You get all the distinctive quality out of the spirit if it has such?—Yes.

12261. If it is potatoes, if it has any fusel oil in it, you get rid of that?—Yes, we get rid of that by the rectifying.

12262. You want nothing but the alcohol?—Yes.

12263. When the spirit is sweetened and coloured in bond and then exported, does it carry a certificate of the Excise or a statement of the nature of the contents on your cask? Has it any Excise guarantee?—It has the marks on the casks.

12264. And the foreign purchaser looks upon that as a Government guarantee of the contents?—I should think so—it is "British compounds," or it is "Mixed spirits."

12265. What I meant was is there a statement of the nature of the mixture—the proportions?—No, there is not.

12266. I understood the blenders of whiskey to object to the continuance of this because their customers consider that if they got such a statement from the Excise it was like a Government guarantee for the whiskey that our laws do not allow the whiskey to be so exported. Is not that so?—I do not quite follow you.

12267. I think in the United States if you export gin, let us say, that you have made in bond, it contains a statement or a certificate from the Excise that it is a spirit of a certain character, sweetened or coloured?—It contains it on the cask.

12268. Only on the cask?—Yes.

12269. I understood that the complaint made by the United States people, for instance, was that when they get whiskey out of bond it contains no such statement?—I do not think they quite understand in the United States that it does not apply to whiskey.

12270. I suppose in your trade you get patent still spirit in Scotland, but it would never occur to you to get pot still whiskey to make rectified spirit from?—No, on account of the cost.

12271. Would it not also be on account of the greater amount of labour?—Yes, it would take more rectifying.

The witness withdrew.

Mr. W. H. Chaplin.

Mr. W. H. Chaplin, called.

12272. (*Dr. G. S. Buchanan.*) You are managing director of W. H. Chaplin and Co., Limited?—Yes.

12273. They are wholesale wine and spirit merchants, of 35 and 36, Mark Lane, and 10, Villiers Street, London?—Yes.

12274. How long have you been in the trade?—Forty-one years.

12275. Your firm's business is that ordinarily known as a "market house" business?—Yes.

12276. Perhaps you will tell us what that means?—It practically means that we hold stock for other merchants to draw from as and when they want it, and in whatever quantities they may want it. We also, of course, do a certain amount of what is called brokerage business. We are agents for part of England for some distilleries, and we are blenders of Scotch whiskey, and we are also agents for sundry foreign houses.

12277. Your principal dealings I suppose are with the bottle trade, are they not?—No, I would not say that. A large part of the market house business is in cask.

12278. In your *précis* you give us some notes with regard to the use of the name "Whiskey." In reading those through it appears to me that you give us considerations that we have had from a great number of witnesses?—That would necessarily be so.

12279. As to the first two pages of your *précis* I am not sure that we need trouble you unless there is anything you very specially wish to bring to our notice?—I particularly wish to bring to your notice that both pot still and patent still have always been classed as whiskies. I have with me here one list of ours 17 years old which shows that, if I may put it in.

12280. Certainly. (*The same was handed to the Commission.*)—Of course, to-day the same thing is done. I have here also a copy of our list referring to our bulk whiskies which I will put in. (*The same was handed to the Commission.*)

12281. The principal point you wish to make is that in this list of 1891 you classify whiskies that you had on hand at a particular time, and offered in your price list as Highland Malts, Islays, Lowland Malts, Campbeltowns, and Grains, and that also you had certain standard blends?—Yes.

12282. Then with regard to Irish whiskies, you had a series of Irish whiskies which, I think, in this particular list are all pot still whiskies?—Yes. As a matter of fact we had very little business in Irish patent still. The bulk of that is handled by the big blenders in Belfast specially, and there is very little trade in it over here because few merchants made their own blends of Irish whiskey until, perhaps, recent years, whereas many used to make their own particular blend of two, three, or four or half a dozen different Scotch distilleries, and therefore stocks of all those had to be held along with grain of the necessary age.

12283. In common with some other witnesses who have given us evidence you have had experience that recently retailers put on sale fresh lines of all malt whiskies and did not find that they were very popular or successful with the trade?—That is so. Many of them came and asked us to take the stocks back again.

12284. Will you now give us your view with regard to the question of a compulsory age limit?—If I may interpose a word, I would say that the one point I wish to emphasise in my evidence on the first page of my *précis* is that until blends were introduced Scotch whiskey was practically an infinitesimal trade, that in the beginning, forty years ago, the sales of Irish whiskey were many times larger than those of Scotch whiskey. I attribute that largely to the fact that Irish pot still whiskies are on the whole essentially lighter in character than the bulk of the Scotch pot still whiskies made from all malt, and that for the reason that the mash has so large a proportion of unmalted grain in it; with the Irish the blend was practically made in the still.

12285. You would agree with some witnesses who have insisted to us that the Irish pot still whiskey is more adapted for use as a self whiskey than the ordinary Scotch pot still whiskey of the present day?—Certainly, especially when it is of moderate age. When the Scotch blends began to be introduced there was an immediate turning over of business; the Irish went down and the Scotch increased enormously.

12286. Do you recognise that there are, at all events, certain Scotch pot still whiskies which as self whiskies are very satisfactory?—There are some which are very satisfactory, and in a sense for certain purposes I hold that the pot still whiskey is greatly superior to the patent. If you have got a sick man and you want to give him a strong stimulant I would say administer a good pot still whiskey of eight or ten years old. But the bulk of the Scotch whiskey trade is not of that kind—it is in the long drink. Men take it with their meals, and in the smoking room, and they want a light and digestible drink, hence the popularity of the blends. I may say that our experience is certainly that the most popular whiskies are those which contain a very large proportion of grain, some of them as much as 60 per cent. Of course, as to very cheap whiskies it goes without saying that some of them are nearly all grain.

12287. In your experience some whiskies of high quality may contain as much grain as 60 per cent?—Certainly. The pot still must be old. I do not attach much importance to the age of the patent,

because from all I have seen of the consumption it goes on very well with comparatively young patent. I read pretty carefully the evidence given before the 1890-91 Committee, and that certainly seemed to me to point to the conclusion that patent still whiskey young was practically as wholesome as it was when old. Of course, as a merchant, I know there are a certain number of patent still whiskies that develop nice flavours when they are kept for a certain time, and that therefore it is to the merchant's advantage to keep them because he gets an extra price for them.

12288. I think you have given now what you specially wish to bring out in your evidence. Would you now go to the question of a compulsory age limit and give us your views on that?—I have always held that mere compulsion would effect no good. It would to a large extent result in giving the hall-mark of so-called Government approval to anything which was, say, two years old, if your limit is to be two years old, so that a mixture of the cheapest and nastiest pure pot still whiskey with the cheapest and nastiest grain whiskey would have precisely the same certificate to go with it to the public as the product of, say, an eight or ten years' old malt and a five or six year old grain.

12289. I do not think the proposal has been made to us that any certificate should be given with regard to whiskey kept for two years. The suggestion is that no whiskey should go out under two years old?—Yes, but still it would go with the approval of the authorities, and that would give it a standing in the eyes of the consumer, and it would enable anyone to label that product as having complied with all the requirements of law and would help the sale of bad stuff for the time. Of course, that would right itself because the public is, after all, a very keen judge of quality, as many big Scotch blenders have known to their cost; when they have attempted to take advantage of their reputation and have let their quality down the public have promptly turned over to another blend. I do not think the age limit would do any good, and it would certainly harm our export trade materially.

12290. Will you tell us about your export trade? Is there a large export trade in new spirit under one or two years old?—I think there is a considerable trade, and if the Trade Mark regulations were perhaps better in countries to which we exported it might be larger, but at present, of course, there is a very strong foreign competition where they send the cheapest articles labelled, unfortunately, as British spirits.

12290*a*. That is an export trade in what is called Scotch and Irish whiskey, is it not?—Certainly.

12291. I suppose to a large extent that is new grain whiskey, the cheapest variety that you speak of?—The very low price stuff for certain markets.

12292. Do you think, as a matter of practical experience, that cheap new grain whiskies going out abroad as Scotch and Irish whiskies have a damaging effect upon the better class of Scotch whiskey?—Undoubtedly, and for that reason I would like to see a certificate as to the age of a blend given by the Excise. I do not see why it should not be. I do not see myself any practical difficulty, and it would be a very material help to the trade of the country both for home and export.

12293. To return to the question of age, I understand you would prefer a graduated duty?—I made that suggestion as long ago as the previous Committee of 1890-91. I think it would meet the matter that the duty should be differentiated to such an extent as, at all events, just to pay the merchants for the expense of the evaporation and the interest on his cost price.

12294. I gather you are not averse to any means that could be taken to secure that better age was given with regard to the generality of whiskey?—I think at home good age is being given. As I said, the public differentiates the quality.

12295. You are thinking mainly of the export trade. In desiring to see some encouragement given for maturing spirits for a greater length of time you are speaking of the export trade?—No, that would apply especially to the home trade. No doubt there are many blends distributed now at a young age which would, with that differentiation, be made up of older whiskies and would therefore be better for the consumer.

12296. (*Dr. Adeney.*) The public would be distinctly the better off, and they would gain?—The public would certainly gain.

12297. (*Dr. G. S. Buchanan.*) With regard to a standard of quality, I understand you are opposed to the notion that the term "Scotch whiskey" should only be applied to blends when they contain certain proportions of malt whiskey?—Yes. I think that would be ruinous to the trade.

12298. You are there speaking of "Scotch whiskey" as applied solely to spirits which do contain that proportion of malt, anything under that proportion of malt not being called Scotch whiskey at all?—I do not approve of any such limitation. I would leave that entirely to the merchants' own interests.

12299. Supposing there was no question of denying to the spirit the term whiskey, would you have any objection to another sort of distinction; for example, if over 50 per cent. of grain was present in a blend, the description given should be a term like Scotch grain blended whiskey. Would you seriously object to that?—It would puzzle the public and make them generally discontented with their liquor without giving them any assurance of good quality. As I say in my *précis*, any such regulation would fail to assist the consumer in obtaining better whiskey, but would, on the other hand, assist in the distribution of faulty blends. There are some 150 pure malt distilleries with varying flavours and values, and the various patent still makes also vary very much in quality and cost; and even in the same distillery one period differs, sometimes very materially, from the next. Under any such regulation as has been suggested (say 50 per cent. of each kind), a blend of the cheapest and nastiest malt of two years old with the cheapest and coarsest grain could be offered to the consumer, with just the same guarantee as a blend of the finest whiskies of either kind.

12300. Then I think you further wish to object, and I think the Commission have got the grounds which you wish to urge pretty well, to any standard which might be set up by chemical analysis?—Certainly.

12301. I do not think we need trouble you to go into that because we have had that from so many other sources?—Certainly.

12302. There is one question I want to put to you on a matter that is not mentioned in your *précis*. Have you experience of packing whiskey for export?—Yes.

12303. I read a statement in a trade paper as to cases of whiskey containing a dozen bottles that were put up in the ordinary way for export and delivery f.o.b., the bottles being labelled and provided with the necessary corks, capsules, and that kind of thing, that the cost of the case and the bottles and the cost of labelling and bottling and delivery, should be taken as somewhere about 3s. a case. I want to know your experience of that, and whether you think that that is approximately correct?—By the time they are put free on board do you mean?

12304. Yes, not making any allowance for the cost of the spirit?—I do not think 3s. would cover it, and I should be inclined to put it nearer 4s. 6d. if the work was done in London, at all events.

12305. This was delivered in Glasgow?—In Glasgow they undoubtedly work cheaper, and their regulations enable them to do that. They have very cheap cases there, and they are nearer to the bottles.

12306. Three shillings would perhaps be possible in Glasgow?—It might be.

12307. I should like to ask you a question concerning the description of some of the spirits. The article in question referred to a circular which has since been sent to the Commission, and it showed that Scotch whiskey in cases, each containing twelve bottles, about two Imperial gallons, strength 17 to 20 under-proof, was being offered at 4s. 11½d. per case for each lot of 2,000 cases. The descriptions in the circular show that the bottles in some of the cases were labelled "Fine old Scotch whiskey." The label is described as: "Thistle label, in green, ruby, black, white, and gold," and "Fine old Scotch whiskey" is branded on the case. In other cases there was "Fine old Highland whiskey," and so on. There is a large

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series of these descriptions which I will not go into as time is short, but the effect of it seems to be that this spirit which obviously must have cost about 2s. for two gallons to produce is described as "Extra special V.O.H. Scotch whiskey," "Fine old Highland Liqueur whiskey," and so forth. Do you think it is satisfactory in the interests of the public that that should go on, and that whiskey should be described in that way?—No, I cannot say that I do. At the same time, that whiskey may be 50 underproof, and therefore may not have cost much more than 1s. for the two gallons. In regard to spirit, everything depends on the strength, especially when you come to deal with duty-paid spirit.

12308. It is 17 to 20 under proof?—I beg your pardon, I did not notice that.

12309. You do not suppose, as a matter of fact, that Highland whiskey can be sold at that price?—No, unless it is faulty. Of course, I have had through my hands very faulty parcels of pot still whiskey which have been sold at ridiculous prices.

12310. (*Dr. Adeney.*) There is one thing I should like to clear up with you. You say with regard to Irish pot still whiskey a mixture of the malted and unmalted grain in the mash tuo really produces a whiskey which to all intents is a blended whiskey, and is analogous to Scotch whiskey?—That is my view.

12311. Is that quite correct?—The product is a lighter whiskey which is much more drinkable at two years old than Highland malt.

12312. You know although the mash is mixed in the Irish practice the after distillation process is very different from that of the Scotch?—Yes, I believe that is so.

12313. And that largely affects the flavour?—Yes, and in different distilleries there are different results and different prices.

12314. It is not quite analogous in that case?—I will go on to say, further, that when the Irishmen began to blend their trade again increased very largely. In regard to an age limit I would like to add one word, that in my opinion a great part of the good malt pot still whiskies are entirely unfit to put into consumption until they are five or six years old, so that any age limit of two years would not help us at all.

12315. Do you think that the practice of the Irish blender has been carried to that fine art that it has in Scotland?—No. I do not think their grain whiskies are in general made as well.

12316. (*Dr. G. S. Buchanan.*) I wish to elaborate, so as to get it on to the Notes, a little more clearly the facts with regard to that printed circular that I spoke to you about just now. The circular in question was sent by a firm in Glasgow at the beginning of this year with regard to "Over 2,000 cases of the following in stock ready for immediate shipment—F.O.B. Glasgow." The heading is "Scotch whiskey in cases, each containing twelve bottles, about two Imperial gallons. Strength 17 to 20 under proof. Price 4s. 11½d. per case for each lot; smaller quantities 3d. per case extra." You have told us, I think, that about 3s. per case would not be perhaps an unreasonable price for bottling, packing, labelling, and so forth?—I think that would be the minimum even in Glasgow.

12317. Then we have to deal with a spirit which cost 1s. 11½d. per case, that is to say, per two gallons?—Yes.

12318. I would just like to read you the descriptions that are given with regard to the different cases. There are various headings: "Quantity," "Description of label," "Wording on label," "Neck label," "Capsules," "Cases branded," "Description of bottles." I will take just one or two. The first is "Description of label: grey ground, colour in red and gold." "Wording on label: Very old Scotch whiskey, special blend." "Neck label: half-moon shaped with three gold stars." "Capsules: gold or blue, old Scotch whiskey." "Cases branded: Very old Scotch whiskey, special blend." "Description of bottles: ordinary clear quarts." Then the next one is "Description of label: thistle shaped, white ground and gold border, with Craigdhu Kingussie view." "Wording on label: Fine old Highland whiskey." "Neck label: half-moon shaped, with three gold stars." "Capsules: gold or blue, old Scotch whiskey." "Cases branded: Fine old Scotch whiskey." "Description of bottles: ordinary clear quarts." Then with regard to the Irish whiskey there is one set of cases of Irish whiskey of 12 bottles, about two imperial gallons; strength 17 to 20 under proof; price 4s. 11½d. per case for each lot, smaller quantities 3d. per case extra. Then it says "Description of label: Irish label, green, blue, brown, white or red." "Wording on label: The O'Brien's Munster blend of old Irish whiskey." "Neck label: half-moon shaped with three gold stars." "Capsule: Gold or red, old Irish whiskey," and the case is branded, "O'Brien's Munster blend of old Irish whiskey." "Description of bottles: ordinary clear quarts." Finally there is a residuum of cases each containing 12 bottles, about two imperial gallons; strength 23 to 25 under proof. They are 4s. 9d. per case for each lot of 12 bottles. I am just expanding this question that I asked you just now in order that it should be clear what was in my mind when I was asking you, which is whether you thought descriptions of this sort of liquor, which clearly cannot correspond to old Highland whiskey and liqueur Scotch whiskey, and so forth, are desirable in the interests of what I may call the legitimate export trade in Scotch and Irish whiskey?—They are entirely undesirable, and if any means can be devised for checking them I am sure all merchants who have anything at stake would be very pleased indeed. I am sure that we have met that sort of thing a great deal down in the south here. Large parcels of similarly labelled whiskies have been distributed from time to time at public auctions, and then afterwards, having been bought by certain houses, have been distributed broadcast to the consumer, certainly to the detriment of the whole of the legitimate trade. Sometimes they have had attached to them "8," "10," or "12 years old," or whatever it may be, and I believe the Excise latterly stepped in to some extent to stop some of the worst of those practices in bond. Those were sold in bond down here at 5s. 6d., 6s., 7s. 6d. per dozen, and so on. Some of them were a little better than others, but all poor things of that description.

12319. (*Mr. Guillemard.*) The Excise have taken action where they have had definite knowledge of a false statement?—That is what I understand.

12320. Definite knowledge as distinct from inference?—Yes.

12321. (*Dr. Horace T. Brown.*) The labelling in a case of that kind would, of course, be out of bond?—No, in bond, otherwise, of course, they would have no sale at a public auction.

12322. (*Dr. G. S. Buchanan.*) Clearly in the case that I have mentioned to you it was done in bond?—Yes, that is so, and until recently I do not think there was any restriction against it. For myself, I should like to see not only a restriction on those, but, as I said, the assistance of the Excise in giving a guarantee to those who do bottle legitimate things. I may say of that I have met many examples of nasty things of that kind doing very considerable harm to the reputation of Scotch whiskey on a recent long tour that I took in the East, and certainly in many places they were entirely undesirable specimens that were submitted to me.

12323. Cases of that kind may account to some extent for the action which is being taken by the United States, and by some of our own Colonies under their food laws with the object of getting a better understanding of what Scotch and Irish whiskey is?—I cannot say that I agree with the action in a number of those places. I believe some of the people who are recommending it hardly know enough of the business.

12324. This gives them a handle?—Yes.

12325. (*Dr. Adeney.*) In answering my last question you just dropped a remark that Irish patent still spirit was not so good as Scotch. Can you say that as a matter of fact from your general knowledge, or is it a general idea?—I would say of my own personal knowledge I have never seen a specimen of Irish grain as good as the best Scotch.

12326. Have you had much experience of the Irish patent still grain spirit?—Yes, I have seen a good many of them.

12327. What makes me ask you is that I have heard it stated that some of the Irish patent still grain spirits are particularly good?—Here and there is a good one, but they are not so good as the finest Scotch; in fact, there is none that I would care to drink.

The witness withdrew.

Mr. PETER MCKECHNIE, called.

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12328. (*Chairman.*) I believe you are senior partner in the firm of Messrs. Bowen & McKechnie?—Yes, I am.

12329. You have been 42 years connected with that firm?—Yes.

12330. You are chairman of the Off-Licences Association and past chairman of the Wine and Spirit Association?—Yes.

12331. What is the business that your firm carries on?—We do a general business as dealers in wines, spirits and liqueurs, supplying wine merchants, off-licence holders and hotels. I believe we are the largest distributors as a market house in that class of business of all the leading proprietary brands of whiskies. We hold stock in order to supply the smaller dealers who draw from us.

12332. Where is your place of business?—Cross Street, Finsbury, E.C.

12333. Your customers number from 3,000 to 4,000?—Yes.

12334. When you first commenced your trade, which you say was 42 years ago, which did you sell more of, Scotch whiskey or Irish whiskey?—Irish whiskey considerably.

12335. In your *précis* I see that you say your sale of Scotch whiskey was almost nominal?—Yes, it was almost nominal in comparison with the Irish.

12336. Was it in the early seventies that the Scotch whiskey began to show itself?—Yes.

12337. To what did you attribute that?—To two causes, I think; one was when we commenced to use grain for blending.

12338. Did not Scotch whiskey begin to show itself before the blending came in?—No.

12339. That you attribute to the blending?—It is to the blending I attribute it, and I think the Scotch houses showed rather more energy than the Irish at that time.

12340. When you first commenced selling Scotch whiskey was it self Scotch whiskey?—We only sold self malt whiskies when I first went into the trade.

12341. When was it the blending came in?—In the early seventies as far as I can remember.

12342. When the attention of the public and your attention was first called by the proceedings that took place in the whiskey prosecution did you in fact introduce a pure malt Scotch whiskey in your connection?—We did.

12343. Did you push that business as much as you could?—We pushed that business to a certain extent, but we found our customers could not sell it, and many wished to return it after a while because the consumers would not buy. They would buy a bottle and take no more afterwards.

12344. Was any reason given to you for the return?—No, except that they could not sell it.

12345. Then did you withdraw that quality?—No, we continued it, but the sale of it was very small in comparison with the others.

12346. Where was that attempt made?—All over the country. We do business in London, and all over England and Wales.

12347. Before the whiskey prosecution did you adopt the plan of labelling most of your blended whiskies?—We did.

12348. What was the nature of the statement you made with regard to that?—I can show you one label which I have here. (*The same was handed to the Commission.*) That was a label we used for the general trade.

12349. That label is this, "Fine old Scotch Whiskey. Guaranteed solely the produce of Scotch Distilleries, being a blend of fine Scotch Malt and Grain"?—Yes. Then I have another here. (*The same was handed to the Commission.*)

12350. That label is, "Certificate of Quality. The 'Glen Alva' Whiskey." What connection has your house with Glen Alva?—It is a brand that belongs to us.

12351. Is it the name of a distillery?—No, a trade name.

12352. Then the label goes on, "The 'Glen Alva' Whiskey is guaranteed to be composed entirely of the produce of well known Scotch Distilleries, being a blend of Fine Highland Malt and Scotch Grain Whiskies. As such, it can be relied on as one of the most wholesome, pure, and delicious Whiskies obtainable. It is well matured by age in Cask, and carefully selected and bottled. Blended, bottled, and guaranteed by Bowen and McKechnie, London and Glasgow." Did you put that on your bottles?—That was on this particular blend, but we had on different blends something similar.

12353. That is the Glen Alva whiskey?—Yes, that one is.

12354. Were those put on all the bottles you sent out?—Yes.

12355. Did you supply these labels to the customers who took the whiskey in cask?—No, the greater bulk of our trade lies in bottled whiskies, and we put those labels on for the protection of the customers.

12356. Do you know of your own knowledge when you send those bottles out with these labels to the licensed victualler, how far the customers ever see the label?—Most of that whiskey is sold in single bottles to the private customer.

12357. You are not speaking of the glass trade?—No, not a glass trade.

12358. You would not know what would happen to the glass trade?—No, we do not do with them.

12359. The bottle speaks for itself?—Yes.

12360. Have you found that your business in blends has increased?—Yes, enormously.

12361. To what do you attribute that?—To the fact that the public prefer a blended whiskey.

12362. That must be so or else they would not have it, but what is the source of their preferring it, do you think?—It is pleasanter to the palate and also, I think, it is more suitable for ordinary consumption. A malt whiskey in my opinion is too heavy to drink continuously, although a glass of pure malt whiskey occasionally is very pleasant.

12363. What is the proportion now of blended whiskies compared with self whiskey?—The proportion we sell is so great that I could hardly give an idea. The proportion of malt sold in bottle is so small.

12364. Would it be 10 to 1?—A great deal more than that.

12365. From your own experience and taste do you prefer a blend?—I always drink a blended whiskey.

12366. What do you say now from your general knowledge of the trade as to the whiskies that you meet in a house? Do you expect to find blends?—Almost universally.

12367. Will you give me your definition of what you would call whiskey?—I should say it is manufactured from cereals malted and unmalted.

12368. Would you draw any distinction in applying the term whiskey to pot still and patent still whiskey?—No, I should not. I should say they are both whiskies.

12369. Of course, you differentiate between Scotch and Irish?—Certainly.

12370. And any other?—Yes, English. I should not agree to spirit made in England being called Scotch or Irish whiskey.

12371. Do you think it would be possible in your blended whiskey to give any detail of the character of the blend so as to communicate it to the customer?—Not beyond that which we put on the label ourselves, which is, "A blend of malt and grain."

12372. I presume you would not allow English whiskey to be blended with Scotch whiskey and called Scotch whiskey?—Certainly not.

12373. As to Scotch whiskey, necessarily for that definition the whole produce ought to be made in Scotland?—Yes.

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12374. Now a question with regard to keeping whiskey in bond. What do you say as to that?—Personally, I have no objection to it being kept in bond, but I should rather prefer it to be kept in bond for a certain period, say, two years, or something of that sort.

12375. In the first place, some whiskies do improve, do they not, in all their qualities by being kept for some time?—I think all do.

12376. There is a difference as between whiskies as to the time that is required to bring them to their best?—Malt Scotch whiskey requires a longer time than grain.

12377. What would you say ought to be the minimum close time during which whiskey ought not to be drunk? Take first the ordinary pot whiskey?—Personally, I think, certainly not under three years.

12378. If that is advantageous to the consumer, how would you enforce that non-drinking for the three years?—It would be compulsorily retained in bond.

12379. Would not that press hardly upon sundry small traders?—I think, as a rule, the small traders buy the whiskey themselves when it is ready for use.

12380. Are those the conditions of delivery?—I think they do not, as a rule, bond the whiskey themselves when it is new to any large extent.

12381. If they took advantage of the young whiskey being cheaper, and sold it to the public, their trade would suffer?—Yes, their trade would suffer, because the public are pretty keen judges.

12382. You would recommend, if it could be carried out, some time limit during which the whiskey should not be drunk?—I do not think it at all undesirable.

12383. (*Dr. Adeney.*) Your classification of whiskies you say would be purely geographical?—Yes.

12384. Would you sell as Scotch whiskey a pure grain whiskey if you were asked for a Scotch whiskey?—As a matter of fact we ourselves do not bottle pure grain whiskey, but we do sell a pure grain whiskey in bottle bottled by the Cambus Distillery. We sell that because there is a demand for it. We sell whatever we are asked for.

12385. (*Dr. G. S. Buchanan.*) Do you sell that as "grain whiskey"?—Yes, as "grain whiskey."

12386. (*Dr. Adeney.*) Not as "Scotch whiskey" simply?—No, as "Scotch grain whiskey."

12387. Do you think it would be right to sell that to a customer as "Scotch whiskey" if he relied upon you as a merchant?—I do not think there is any reason why Scotch grain whiskey should not be sold as Scotch whiskey, but personally we do not do so.

12388. I agree with you as to the qualifying term Scotch whiskey to Scotch grain whiskey?—I think it should be sold as "Scotch grain whiskey."

12389. (*Mr. J. Y. Buchanan.*) Would you consider if you bought Scotch whiskey and it was Cambus that you were being defrauded if it had not been called "grain whiskey"?—Are you speaking to me as a consumer?

12390. Yes, as a consumer?—I do not think so.

12391. It would be a perfectly legitimate expression to call that "Scotch whiskey"?—Yes.

The witness withdrew.

Adjourned.

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Tables handed in by Mr. A. J. Tedder, Chief Inspector of Excise.

I.—DISTILLING SEASON, 1906-7.

(1) Number of Distilleries at work.

England.	Scotland.	Ireland.
8	150	27

There were besides 1 distillery in England (Pot), 12 in Scotland (9 Pot and 3 Patent), and 3 in Ireland (2 Pot and 1 Patent), which did not work.

(2) Distilleries Classified.

(A) According to Stills used.

England			Scotland.			Ireland.		
Pot.	Pot and Patent.	Patent.	Pot.	Pot and Patent.	Patent.	Pot.	Pot and Patent	Patent.
—	3	5	137	3	10	18	7	2

(B) According to materials used.

England.			Scotland.			Ireland.		
Malt.	Malt and Unmalted Grain.	Malt, Unmalted Grain, and Molasses.	Malt.	Malt and Unmalted Grain.	Malt, Unmalted Grain, and Molasses.	Malt.	Malt and Unmalted Grain.	Malt, Unmalted Grain, and Molasses.
—	3	5	142	8	—	3	24	—

(3) Percentage of Malt to Unmalted Grain used at—

(A) Distilleries using Pot Stills only.

England.		Scotland.		Ireland.	
Malt.	Unmalted Grain.	Malt.	Unmalted Grain.	Malt.	Unmalted Grain.
...	...	100·0	...	43·9	56·1

(B) Distilleries using Pot and Patent Stills.

England.		Scotland.		Ireland.	
Malt.	Unmalted Grain.	Malt.	Unmalted Grain.	Malt	Unmalted Grain.
24·8	75·2	41·6	58·4	32·9	67·1

(C) Distilleries using Patent Stills only.

England.		Scotland.		Ireland.	
Malt.	Unmalted Grain.	Malt.	Unmalted Grain.	Malt.	Unmalted grain.
24·1	75·9	32·8	67·2	30·5	69·5

DISTILLING SEASON, 1906–7—*continued.*

(4) SPIRITS PRODUCED.

(A) From Malt only.

Country.	Pot Still Distilleries.	Patent Still Distilleries, including those where Pot Stills are also used.
	Proof Gallons.	Proof Gallons.
England	Nil.	Nil.
Scotland	10,510,438	392,000 (estimated)
Ireland	279,728	Nil.

(B) From Malt and Unmalted Grain.

Country.	Pot Still Distilleries.	Patent Still Distilleries, including those where Pot Stills are also used.
	Proof Gallons.	Proof Gallons.
England	—	2,972,733
Scotland	—	14,325,120
Ireland	3,313,446	8,372,607

(C) From Malt, Unmalted Grain, Glucose, &c., and Molasses.

Country.	Pot Still Distilleries.	Patent Still Distilleries, including those where Pot Stills are also used.
	Proof Gallons.	Proof Gallons.
England	—	10,556,964
Scotland	—	—
Ireland	—	—

(5) PERCENTAGE OF TOTAL ESTIMATED PRODUCE DERIVED FROM DIFFERENT MATERIALS, calculated from the returns of materials made by the Distillers.

Distilleries in	Malt.	Unmalted Grain (including Rice).	Molasses.	Glucose and Sugar.
England	10·4	39·8	49·7	·02
Scotland	58·4	41·6	—	—
Ireland	31·6	68·4	—	—
UNITED KINGDOM	39·3	47·4	13·3	·008 (negligible)

(6) YEAST-MAKING DISTILLERIES.

ENGLAND.	SCOTLAND.	IRELAND.
4	7	6

II.—BRITISH SPIRITS.

(1) TABLE showing for the UNITED KINGDOM the NET RECEIPT OF DUTY ON HOME MADE SPIRITS in the period 1896–97 to 1906–07.

Year ended 31st March.	Net Receipt.	Year ended 31st March.	Net Receipt.
	£		£
1896–97	16,816,484	1902–03	19,033,296
1897–98	17,218,906	1903–04	18,667,818
1898–99	17,967,142	1904–05	18,135,931
1899–1900	20,303,147	1905–06	17,765,352
1900–01	20,124,003	1906–07	17,745,125
1901–02	18,490,779		

(2) TABLE showing the NUMBER OF PROOF GALLONS OF HOME MADE SPIRITS DISTILLED IN EACH PART OF THE UNITED KINGDOM during the period 1896–97 to 1906–07.

YEAR ENDED 31ST MARCH.	ENGLAND.	SCOTLAND.	IRELAND.	UNITED KINGDOM.
	Proof Gallons.	Proof Gallons.	Proof Gallons.	Proof Gallons.
1896–97	11,821,182	28,518,681	14,282,843	54,622,706
1897–98	12,360,255	33,744,503	14,547,708	60,652,466
1898–99	12,913,771	35,769,114	14,754,999	63,437,884
1899–1900	12,966,941	31,798,465	14,480,871	59,246,277
1900–01	12,603,311	30,196,016	14,221,520	57,020,847
1901–02	12,438,596	29,973,193	12,780,535	55,192,324
1902–03	11,295,563	26,007,569	12,441,298	49,744,430
1903–04	11,694,851	27,110,977	13,010,772	51,816,600
1904–05	12,156,652	25,185,235	11,798,155	49,140,042
1905–06	12,750,749	23,812,839	12,650,577	49,214,165
1906–07	13,424,854	24,839,870	12,053,184	50,317,908

(3) TABLE showing the NUMBER OF DISTILLERIES AT WORK in the period from 1st October, 1895, to 30th September, 1906.

YEAR ENDED 30TH SEPTEMBER.	ENGLAND.	SCOTLAND.	IRELAND.	UNITED KINGDOM.
1896	11	136	26	173
1897	11	143	28	182
1898	11	157	29	197
1899	10	161	29	200
1900	10	159	30	199
1901	9	156	28	193
1902	9	152	29	190
1903	9	149	28	186
1904	8	152	28	188
1905	8	153	27	188
1906	8	150	28	186

(4) TABLE showing the NUMBER OF DISTILLERIES AT WORK in ENGLAND, SCOTLAND, and IRELAND, respectively, in each of the years 1888 to 1907 inclusive, classified according to the kind of Stills used.

YEAR ENDED 30TH SEPTEMBER.	ENGLAND.			SCOTLAND.			IRELAND.			UNITED KINGDOM.		
	Number of Distilleries with			Number of Distilleries with			Number of Distilleries with			Number of Distilleries with		
	Pot Stills only.	Patent Stills only.	Pot and Patent Stills.	Pot Stills only.	Patent Stills only.	Pot and Patent Stills.	Pot Stills only.	Patent Stills only.	Pot and Patent Stills.	Pot Stills only.	Patent Stills only.	Pot and Patent Stills.
1888	—	8	2	114	7	6	22	2	5	136	17	13
1889	—	8	2	113	8	5	23	2	5	136	18	12
1890	—	8	2	111	8	5	23	2	4	134	18	11
1891	1	7	2	115	8	5	22	2	5	138	17	12
1892	1	6	3	117	8	5	21	2	5	139	16	13
1893	1	6	4	119	8	5	21	2	5	141	16	14
1894	1	5	5	120	7	5	20	2	5	141	14	15
1895	1	5	5	119	8	5	20	2	5	140	15	15
1896	1	7	3	123	8	5	19	2	5	143	17	13
1897	1	7	3	129	8	6	20	1	7	150	16	16
1898	1	7	3	142	9	6	21	1	7	164	17	16
1899	—	7	3	145	9	7	20	1	8	165	17	18
1900	—	7	3	142	11	6	21	1	8	163	19	17
1901	—	6	3	139	11	6	19	1	8	158	18	17
1902	—	6	3	136	10	6	19	1	9	155	17	18
1903	—	6	3	133	10	6	18	1	9	151	17	18
1904	—	5	3	136	10	6	18	1	9	154	16	18
1905	—	5	3	140	9	4	17	2	8	157	16	15
1906	—	5	3	138	9	3	18	2	8	156	16	14
1907	—	5	3	137	10	3	18	2	7	155	17	13

(5) TABLE showing the NUMBER OF PROOF GALLONS OF HOME MADE SPIRITS REMAINING IN WAREHOUSES on the 31st March in each year of the period 1896-97 to 1906-07, and on which Duty had not then been paid.

YEAR ENDED 31ST MARCH.	ENGLAND.	SCOTLAND.	IRELAND.	UNITED KINGDOM.
	Proof Gallons.	Proof Gallons.	Proof Gallons.	Proof Gallons.
1896-97	11,594,213	77,172,675	34,741,027	123,507,915
1897-98	11,973,960	89,758,837	35,943,678	137,676,475
1898-99	12,198,240	103,290,391	36,243,908	151,732,539
1899-1900	12,132,304	109,898,389	35,139,275	157,169,968
1900-01	11,905,058	114,853,325	34,744,446	161,502,829
1901-02	12,606,895	119,948,047	34,456,792	167,011,734
1902-03	12,637,979	120,342,958	33,545,782	166,526,719
1903-04	12,474,438	121,397,951	33,283,115	167,155,504
1904-05	11,847,483	121,778,039	31,760,947	165,386,469
1905-06	11,283,004	120,242,108	31,994,845	163,519,957
1906-07	10,897,109	118,977,707	31,773,593	161,648,409

(6) TABLE showing the QUANTITIES OF HOME MADE SPIRITS RETAINED in ENGLAND, SCOTLAND, and IRELAND, and the UNITED KINGDOM, FOR CONSUMPTION, in the period 1896-97 to 1906-07.

YEAR ENDED 31ST MARCH.	ENGLAND.	SCOTLAND.	IRELAND.	UNITED KINGDOM.
	Proof Gallons.	Proof Gallons.	Proof Gallons.	Proof Gallons.
1896-97	21,296,789	6,622,190	4,207,259	32,126,238
1897-98	21,981,562	6,760,037	4,156,674	32,898,273
1898-99	23,145,797	7,078,514	4,109,773	34,334,084
1899-1900	25,623,177	8,380,378	4,713,178	38,716,733
1900-01	24,993,993	7,471,401	4,238,334	36,703,728
1901-02	22,826,871	7,115,121	3,807,239	33,749,231
1902-03	23,356,933	7,399,424	4,008,778	34,765,135
1903-04	22,974,805	7,192,247	3,936,059	34,103,111
1904-05	22,661,420	6,758,901	3,737,623	33,157,944
1905-06	22,139,541	6,711,147	3,636,270	32,486,958
1906-07	22,026,732	6,851,919	3,632,665	32,511,316

(7) TABLE showing, for the UNITED KINGDOM, the NUMBER OF PROOF GALLONS OF HOME MADE, COLONIAL, AND FOREIGN SPIRITS RETAINED FOR CONSUMPTION in the period 1896-97 to 1906-07, with the Estimated Population of the UNITED KINGDOM in each year and the Estimated Consumption per head of the population.

YEAR ENDED 31ST MARCH.	POPULATION (Estimated).	HOME MADE SPIRITS. (Subject to Excise Duty.)		COLONIAL AND FOREIGN SPIRITS. (Subject to Customs Duty.)		Proof Gallons of Spirits of all kinds per Head of Population.
		Proof Gallons.	Proof Gallons per Head of Population.	Proof Gallons.	Proof Gallons per Head of Population.	
1896-97	39,599,000	32,126,238	·81	8,287,562	·20	1·01
1897-98	39,987,000	32,898,273	·82	8,250,603	·21	1·03
1898-99	40,381,000	34,334,084	·85	8,127,940	·20	1·05
1899-1900	40,774,000	38,716,733	·95	9,301,163	·23	1·18
1900-01	41,155,000	36,703,728	·89	8,657,098	·21	1·10
1901-02	41,551,000	33,749,231	·81	8,299,842	·20	1·01
1902-03	41,961,000	34,765,135	·83	8,550,613	·20	1·03
1903-04	42,371,000	34,103,111	·80	8,064,910	·19	·99
1904-05	42,793,000	33,157,944	·77	6,912,492	·16	·93
1905-06	43,221,000	32,486,958	·75	6 734 991	·16	·91
1906-07	43,659,000	32,511,316	·74	7,298,145	·17	·91

The figures of population have been revised in accordance with the most recent statistics of the Registrar-General.

(8) TABLE showing the NUMBER OF PROOF GALLONS OF HOME MADE SPIRITS EXPORTED from the UNITED KINGDOM in the period 1896-97 to 1906-07.

YEAR ENDED 31ST MARCH.	QUANTITIES.	YEAR ENDED 31ST MARCH.	QUANTITIES.
	Proof Gallons.		Proof Gallons.
1896-97	4,790,181	1902-03	6,438,802
1897-98	4,585,626	1903-04	6,334,971
1898-99	5,090,290	1904-05	6,954,037
1899-1900	5,284,611	1905-06	7,049,798
1900-01	5,773,718	1906-07	7,341,077
1901-02	6,312,219		

(9) TABLE showing, for ENGLAND, SCOTLAND, and IRELAND, and for the UNITED KINGDOM, the NUMBER OF PROOF GALLONS OF HOME MADE AND COLONIAL AND FOREIGN SPIRITS METHYLATED in the period 1896-97 to 1906-07.

YEAR ENDED 31ST MARCH.	ENGLAND.	SCOTLAND.	IRELAND.	UNITED KINGDOM.
	Proof Gallons.	Proof Gallons.	Proof Gallons.	Proof Gallons.
Home Made Spirits.				
1896-97	3,664,125	411,917	42,832	4,118,874
1897-98	3,943,582	476,824	40,456	4,460,862
1898-99	4,149,128	587,088	45,153	4,781,369
1899-1900	4,289,437	646,664	50,926	4,978,027
1900-01	4,329,214	692,486	49,013	5,070,713
1901-02	4,010,334	575,606	54,830	4,640,770
1902-03	3,574,732	605,012	59,944	4,239,688
1903-04	4,398,002	599,727	56,857	5,054,586
1904-05	4,850,781	551,855	50,938	5,453,574
1905-06	5,036,295	575,689	51,445	5,663,429
1906-07	5,361,227	644,701	49,357	6,055,285
Colonial and Foreign Spirits.				
1896-97	24,163	273	—	24,436
1897-98	1,706	—	—	1,706
1898-99	3,045	735	—	3,780
1899-1900	5,710	535	—	6,245
1900-01	120,332	—	—	120,332
1901-02	519,325	108,085	—	627,410
1902-03	1,120,115	91,886	—	1,212,001
1903-04	334,140	—	—	334,140
1904-05	8,079	—	—	8,079
1905-06	—	—	—	—
1906-07	—	—	—	—
Total Home Made and Colonial and Foreign Spirits.				
1896-97	3,688,288	412,190	42,832	4,143,310
1897-98	3,945,288	476,824	40,456	4,462,568
1898-99	4,152,173	587,823	45,153	4,785,149
1899-1900	4,286,147	647,199	50,926	4,984,272
1900-01	4,449,546	692,486	49,013	5,191,045
1901-02	4,529,659	683,691	54,830	5,268,180
1902-03	4,694,847	696,898	59,944	5,451,689
1903-04	4,732,142	599,727	56,857	5,388,726
1904-05	4,858,860	551,855	50,938	5,461,653
1905-06	5,036,295	575,689	51,445	5,663,429
1906-07	5,361,227	644,701	49,357	6,055,285

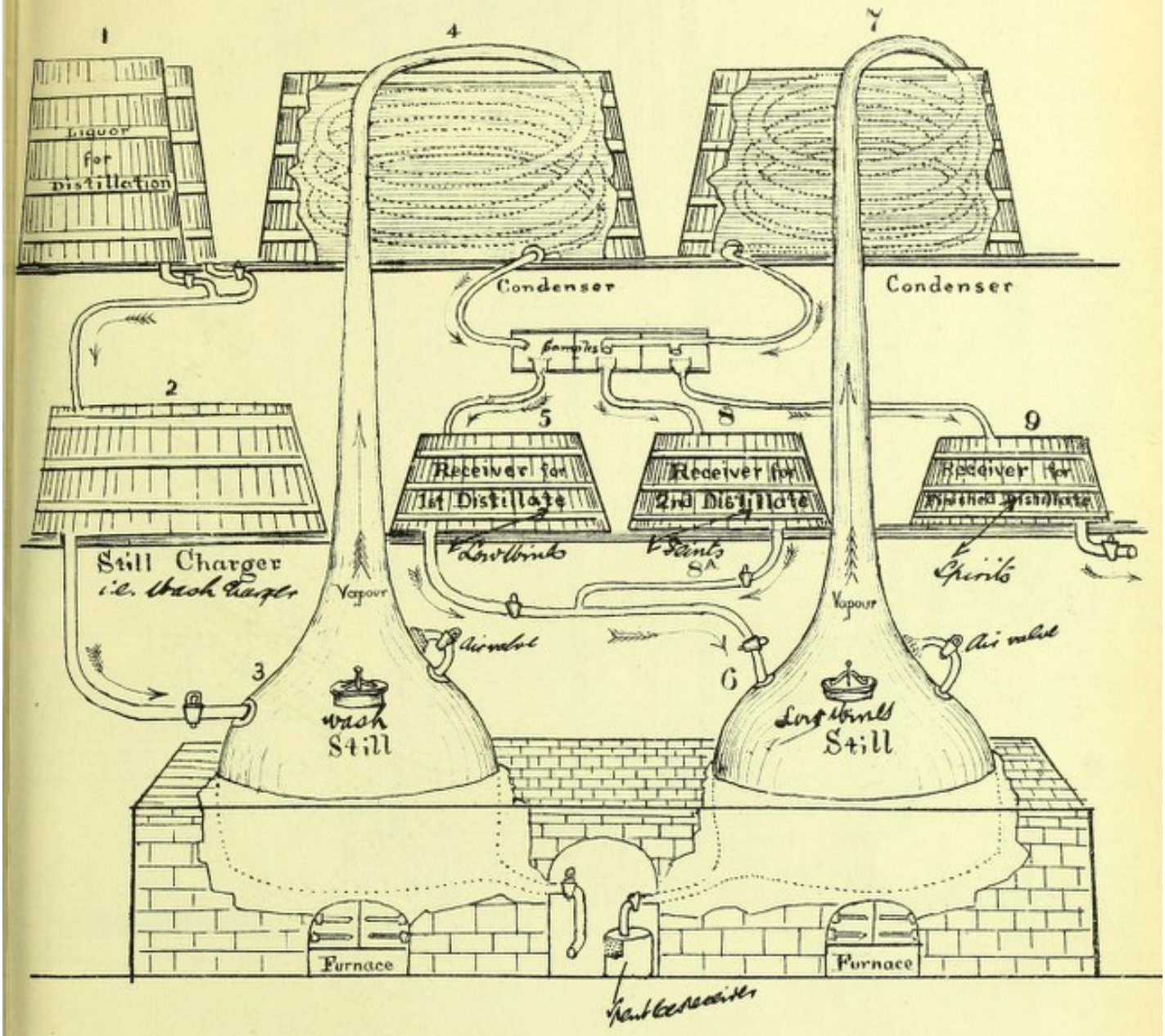
(10) TABLE showing the QUANTITIES of HOME MADE AND FOREIGN SPIRITS allowed to be received in a pure state for use in connection with ARTS AND MANUFACTURES under Section 8 of the Finance Act, 1902.

YEAR ENDED 31ST MARCH.	USE.	HOME-MADE.	FOREIGN.	TOTAL.
		Proof Gallons.	Proof Gallons.	Proof Gallons.
1902-03	Arts and Manufactures	98	243	341
	Scientific (Universities, Hospitals, &c.)	66	292	358
		164	535	699
1903-04	Arts and Manufactures	206,192	260	206,452
	Scientific (Universities, Hospitals, &c.)	310	1,962	2,272
		206,502	2,222	208,724
1904-05	Arts and Manufactures	266,793	913	267,706
	Scientific (Universities, Hospitals, &c.)	827	1,853	2,680
		267,620	2,766	270,386
1905-06	Arts and Manufactures	352,795	1,721	354,516
	Scientific (Universities, Hospitals, &c.)	1,054	2,260	3,314
		353,849	3,981	357,830
1906-07	Arts and Manufactures	431,189	709	431,898
	Scientific (Universities, Hospitals, &c.)	1,221	2,796	4,017
		432,410	3,505	435,915

APPENDIX B.

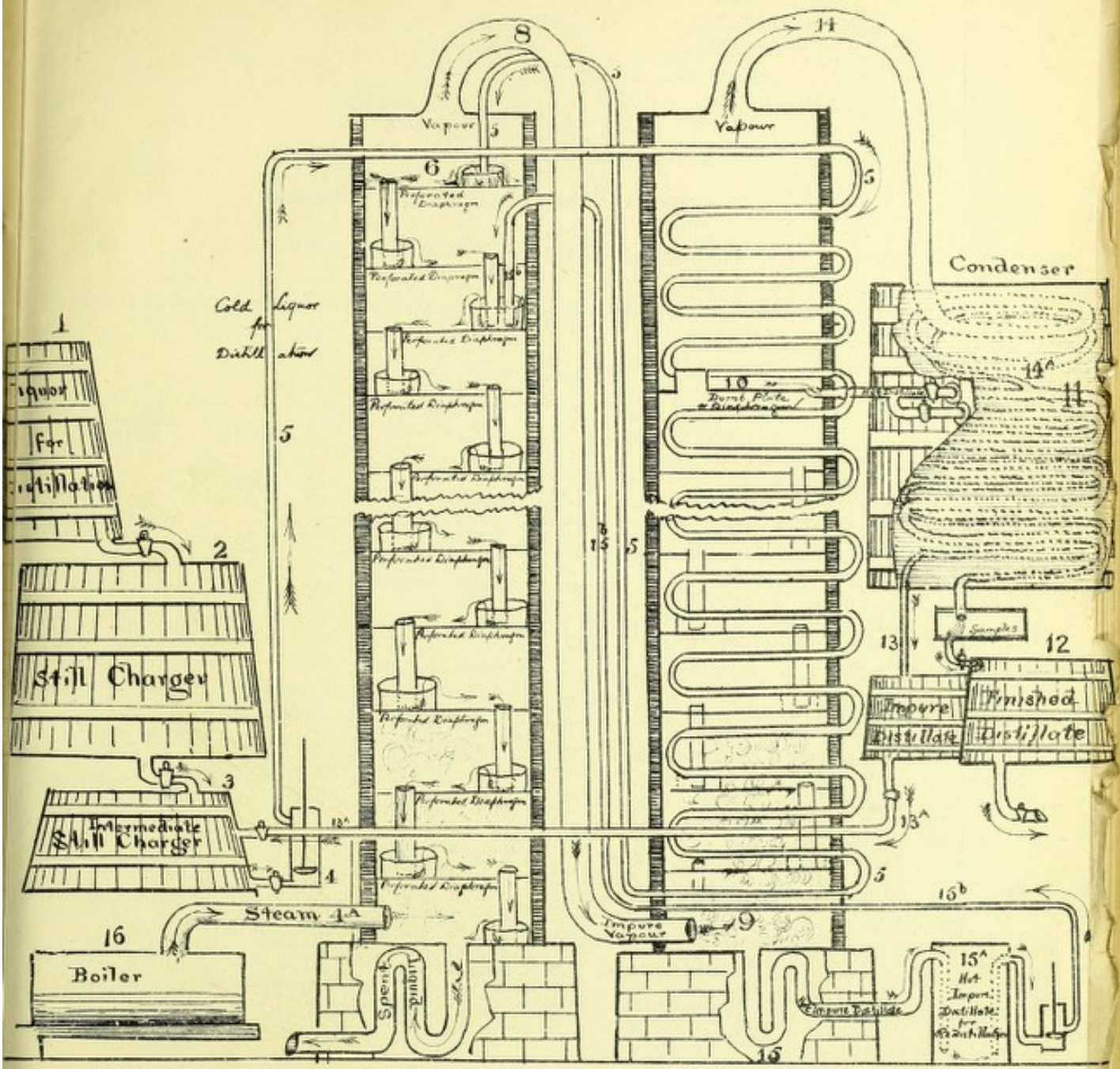
DRAWINGS OF POT AND PATENT STILLS.

Handed in by Mr. A. J. TEDDER, Chief Inspector of Excise.



Pot Stills.

Order of working - 1. Vats for crude liquor. 2. Vat for containing liquor for distillation. 3 Still. 4. Worm or Condenser 5. Receiver for product of 1st distillation. 6. Still to be charged from № 5 or from № 8. 7. Worm or Condenser. 8 Product of 2nd distillation, impure, to be conveyed by 8A into № 6. 9. Finished product



Coffey's Distilling Apparatus.

Order of process – 1. Vat for crude liquor. 2. Charger for Still. 3 Additional Charger. 4. Pump. 5. Pipe conveying liquor to be distilled. Col: № II containing № 5 Pipe, impure Vapour from Col: I and dumb plate where hot distillate is drawn off Col: № I containing liquor descending from diaphragm to diaphragm and ascending steam from boiler. 6. Liquor spreading over diaphragm. 7. Spent liquor. 8. Vapour from steam and liquor to bottom of Col: II. 9. Vapour ascending to Col: II 10. Plate where hot product condensed is drawn off. 11. Hot product condenser. 12. Finished Product. 13. Impure product for re-distillation. 13^A Impure product to Still Charger. 14. Uncondensed Vapour to be condensed in 14^A and conveyed by 13 and 13^A to Still Charger. 15. Impure Spirit liquid for re-distillation through 15^A and 15^b to Col: № I. 16. Steam boiler.

1903 3. 08.

APPENDIX C.

Tables handed in by Mr. A. Richardson, Inspector of Customs.

I.—IMPORTS OF BRANDY.—QUANTITIES AND VALUES.

(*a.*)—Table showing the Quantities, in proof gallons, of Brandy imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Norway	—	—	6,276	3,342	3,163	4,599	289	1,928	10,417	—
Germany	—	—	111,759	82,669	92,624	90,836	42,830	36,191	59,166	53,297
Netherlands	—	—	18,818	15,048	11,277	6,926	6,163	4,995	4,058	1,765
France	—	—	1,813,787	2,369,673	1,621,063	1,411,767	1,391,726	1,984,538	1,237,084	1,721,291
Portugal	—	—	964	4,396	1,165	780	733	2,048	2,223	1,887
Spain	—	—	39,629	32,474	35,510	47,065	18,467	21,603	11,761	12,377
Italy	—	—	—	—	—	956	1,764	20,570	1,168	5,021
Greece	—	—	5,635	2,233	—	1,165	2,058	138	17,906	3,166
Egypt	—	—	6,506	35,604	25,440	32,424	68,166	69,066	50,551	57,682
United States of America	—	—	16,850	4,409	—	12,574	29,332	3,425	35	249
Other Foreign Countries	—	—	5,483	4,908	7,931	12,115	10,027	7,425	9,372	1,590
Total from Foreign Countries	—	—	2,025,707	2,554,756	1,798,173	1,621,207	1,571,555	2,151,927	1,403,741	1,858,325
Australia—										
Southern Australia (including Northern Territories)	—	—	1,019	—	1,865	291	2,998	3,659	2,779	1,359
Victoria	—	—	27,164	13,486	57	26,655	5,945	19,465	5,299	2,558
New South Wales	—	—	—	—	840	—	1,152	258	—	—
Cyprus	—	—	7,501	5,404	2,844	7,116	6,017	10,725	819	4,408
Other British Possessions	—	—	273	528	1,674	529	18	244	135	671
Total from British Possessions	—	—	35,957	19,418	7,280	34,591	16,130	34,351	9,032	8,996
Total	—	—	2,061,664	2,574,174	1,805,453	1,655,798	1,587,685	2,186,278	1,412,773	1,867,321

Imported in Bottles.

Germany	—	—	400	99	137	187	121	108	23	66
Netherlands	—	—	3,628	2,362	3,244	1,350	870	952	1,009	1,311
France	—	—	528,109	501,778	490,623	478,957	458,011	448,906	457,978	473,457
Spain	—	—	191	326	304	234	213	573	1,066	671
Other Foreign Countries	—	—	603	2,293	1,024	603	244	270	1,081	257
Total from Foreign Countries	—	—	532,931	506,858	495,332	481,334	459,459	450,809	461,157	475,762
Australia	—	—	1,316	15	226	26	109	106	8	57
Other British Possessions	—	—	354	478	425	400	251	404	397	622
Total from British Possessions	—	—	1,670	493	651	426	360	510	405	679
Total	—	—	534,601	507,351	495,983	481,760	459,819	451,319	461,562	476,441

Note.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

IMPORTS OF BRANDY—*continued.*

(*a*) TABLE showing the QUANTITIES, in proof gallons, of Brandy imported into the United Kingdom during the Ten Years, 1898 to 1907—*continued.*

Total Importations in Casks and Bottles.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907
	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Norway	2	641	6,363	3,342	3,164	4,599	294	1,928	10,423	11
Germany	161,717	82,375	112,159	82,768	92,761	91,023	42,951	36,299	59,189	53,363
Netherlands	22,066	24,330	22,446	17,410	14,521	8,276	7,033	5,947	5,067	3,076
France	2,208,346	2,259,021	2,341,896	2,871,451	2,111,686	1,890,724	1,849,737	2,433,444	1,695,062	2,194,748
Portugal	1,452	723	964	4,399	1,177	789	735	2,048	2,223	1,887
Spain	51,676	46,741	39,820	32,800	35,814	47,299	18,680	22,176	12,827	13,048
Italy	—	—	—	—	—	995	1,809	20,661	1,176	5,029
Greece	2,318	352	5,778	2,239	—	1,197	2,112	208	17,938	3,181
Egypt	3,910	7,096	6,506	35,939	25,899	32,606	68,244	69,066	50,560	57,712
United States of America	5,859	8,388	16,850	4,651	—	12,611	29,332	3,425	35	255
Other Foreign Countries	13,830	24,705	5,856	6,615	8,474	12,422	10,087	7,534	10,398	1,777
Total from Foreign Countries	2,471,176	2,454,372	2,558,638	3,061,614	2,293,496	2,102,541	2,031,014	2,602,736	1,864,898	2,334,087
Australia—										
Southern Australia (including Northern Territories)	1,345	369	1,349	—	1,865	306	3,032	3,740	2,781	1,359
Victoria	40,485	8,383	28,148	13,486	127	26,655	6,020	19,480	5,299	2,558
New South Wales	—	159	2	15	985	—	1,152	258	6	—
Cyprus	—	409	7,501	5,404	2,853	7,136	6,033	10,726	819	4,408
Other British Possessions	1,783	1,430	627	1,006	2,110	920	253	657	532	1,350
Total from British Possessions	43,613	10,750	37,627	19,911	7,940	35,017	16,490	34,861	9,437	9,675
Total	2,514,789	2,465,122	2,596,265	3,081,525	2,301,436	2,137,558	2,047,504	2,637,597	1,874,335	2,343,762

(*b*) TABLE showing the VALUES of Brandy imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Norway	—	—	743	316	301	654	35	245	648	—
Germany	—	—	13,738	11,441	9,736	8,615	4,530	4,105	6,882	6,207
Netherlands	—	—	5,059	3,805	2,952	1,726	2,186	1,609	1,028	387
France	—	—	616,232	817,769	526,937	464,707	449,461	680,029	411,765	561,453
Portugal	—	—	378	958	319	227	164	500	429	549
Spain	—	—	12,334	10,655	10,659	16,404	6,200	6,115	3,547	4,371
Italy	—	—	—	—	—	178	579	5,989	308	1,636
Greece	—	—	685	605	—	155	336	30	1,227	1,592
Egypt	—	—	607	4,242	2,598	3,303	10,844	11,524	9,143	9,105
United States of America	—	—	2,073	682	—	2,093	4,852	800	24	100
Other Foreign Countries	—	—	1,164	1,494	1,616	1,536	2,100	1,236	1,444	455
Total from Foreign Countries	—	—	653,013	851,967	555,118	499,598	481,287	712,182	436,445	585,855
Australia—										
Southern Australia (including Northern Territories)	—	—	215	—	535	60	902	948	661	502
Victoria	—	—	8,328	3,588	39	9,924	1,377	5,035	1,250	610
New South Wales	—	—	—	—	317	—	340	69	—	—
Cyprus	—	—	1,240	1,265	560	2,108	1,299	2,615	80	1,062
Other British Possessions	—	—	265	242	666	265	16	96	55	223
Total from British Possessions	—	—	10,048	5,095	2,117	12,357	3,934	8,763	2,046	2,397
Total	—	—	663,061	857,062	557,235	511,955	485,221	720,945	438,491	588,252

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

IMPORTS OF BRANDY—*continued.*

(*b*) TABLE showing the VALUES of Brandy imported into the United Kingdom during the Ten Years, 1898 to 1907—*continued.*

Imported in Bottles.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Germany	—	—	315	75	119	128	137	84	21	52
Netherlands	—	—	4,634	2,739	3,317	1,524	1,313	1,247	1,130	1,158
France	—	—	535,813	526,405	524,180	514,890	507,997	506,939	516,197	531,193
Spain	—	—	163	290	286	164	235	605	1,005	618
Other Foreign Countries	—	—	593	1,709	613	487	194	205	765	322
Total from Foreign Countries	—	—	541,518	531,218	528,515	517,193	509,876	509,080	519,118	533,343
Australia	—	—	924	14	198	18	83	86	11	11
Other British Possessions	—	—	304	340	388	280	182	387	299	585
Total from British Possessions	—	—	1,228	354	586	298	265	473	310	596
Total	—	—	542,746	531,572	529,101	517,491	510,141	509,553	519,428	533,939

Total Importations in Casks and Bottles.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Norway	1	60	811	316	301	654	38	245	654	9
Germany	25,202	11,998	14,053	11,516	9,855	8,743	4,667	4,189	6,903	6,259
Netherlands	10,492	13,204	9,693	6,544	6,269	3,250	3,499	2,856	2,158	1,545
France	1,080,544	1,090,577	1,152,045	1,344,174	1,051,117	979,597	957,458	1,186,968	927,962	1,092,646
Portugal	527	249	378	960	333	242	167	500	429	549
Spain	17,042	15,586	12,497	10,945	10,945	16,568	6,435	6,720	4,552	4,989
Italy	—	—	—	—	—	205	622	6,039	310	1,648
Greece	290	36	844	612	—	176	385	84	1,259	1,608
Egypt	401	875	607	4,368	2,743	3,393	10,894	11,524	9,150	9,127
United States of America	787	1,295	2,073	753	—	2,120	4,852	800	24	111
Other Foreign Countries	2,274	2,415	1,530	2,997	2,064	1,843	2,146	1,337	2,162	707
Total from Foreign Countries	1,137,560	1,136,295	1,194,531	1,383,185	1,083,627	1,016,791	991,163	1,221,262	955,563	1,119,198
Australia—										
Southern Australia (including Northern Territories	453	312	450	—	535	72	930	1,004	663	502
Victoria	10,263	2,615	9,015	3,588	112	9,924	1,432	5,045	1,250	610
New South Wales	—	152	2	14	435	—	340	69	9	—
Cyprus	—	73	1,240	1,265	566	2,118	1,309	2,617	80	1,062
Other British Possessions	1,058	830	569	582	1,061	541	188	501	354	819
Total from British Possessions	11,774	3,982	11,276	5,449	2,709	12,655	4,199	9,236	2,356	2,993
Total	1,149,334	1,140,277	1,205,807	1,388,634	1,086,336	1,029,446	995,362	1,230,498	957,919	1,122,191

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

II.—IMPORTS OF RUM.—QUANTITIES AND VALUES.

(*a*) TABLE showing the QUANTITIES, in proof gallons, of Rum imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
			Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Germany	—	—	21,911	21,116	22,810	17	—	36,098	9	—
Netherlands	—	—	290,788	376,307	259,459	277,933	148,159	22,675	78,717	41,715
Dutch Guiana	—	—	27,373	37,897	—	—	4,204	—	—	25,715
France	—	—	188,730	620,640	739,548	292,367	95,657	209,588	154,198	468,176
United States of America	—	—	901,741	245,537	359,646	78,669	107,129	136,586	63,189	53,926
Other Foreign Countries	—	—	3,336	22,235	11,995	1,379	896	—	2,331	2,004
Total from Foreign Countries	—	—	1,433,879	1,323,732	1,393,458	650,365	356,045	404,947	298,444	591,536
British South Africa	—	—	—	—	—	—	—	20,218	34,527	99,503
Mauritius and Dependencies	—	—	415,715	256,080	36,389	—	—	45,598	—	34,000
Australia—										
New South Wales	—	—	—	—	—	—	—	41,457	13,859	—
Queensland	—	—	16,631	2,532	—	—	—	7,197	22,794	16,635
Canada	—	—	748	225,366	607,320	5,392	27,490	82,309	122,934	429,324
British West India Islands	—	—	1,204,473	1,908,074	2,250,045	1,399,379	1,443,926	1,276,831	1,500,760	1,407,000
British Guiana	—	—	3,115,898	2,889,449	3,850,632	3,429,442	2,876,454	2,319,806	3,205,726	2,920,132
Other British Possessions	—	—	8,272	86,612	50,008	62	—	84	521	—
Total from British Possessions	—	—	4,761,737	5,368,113	6,794,394	4,834,275	4,347,870	3,793,500	4,901,121	4,906,594
Total	—	—	6,195,616	6,691,845	8,187,852	5,484,640	4,703,915	4,198,447	5,199,565	5,498,130

Imported in Bottles.

Foreign Countries	—	—	368	113	135	88	2	13	53	17
British Possessions	—	—	563	643	248	433	271	187	201	304
Total	—	—	931	756	383	521	273	200	254	321

Total Importations in Casks and Bottles.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Germany	4,659	63,876	21,930	21,124	22,829	17	2	36,101	9	1
Netherlands	30,222	108,347	290,788	376,308	259,464	277,933	148,159	22,675	78,717	41,715
Dutch Guiana	61,715	49,716	27,373	37,897	—	—	4,204	—	—	25,715
France	71	442,587	188,730	620,724	739,619	292,422	95,657	209,594	154,198	468,179
United States of America	465,740	171,170	901,742	245,542	359,686	78,669	107,129	136,590	63,189	53,926
Other Foreign Countries	5,010	122,623	3,684	22,250	11,995	1,412	896	—	2,384	2,017
Total from Foreign Countries	567,417	958,319	1,434,247	1,323,845	1,393,593	650,453	356,047	404,960	298,497	591,553
British South Africa	—	—	—	—	—	—	—	20,218	34,527	99,653
Mauritius and Dependencies	96,692	347,578	415,715	256,080	36,389	—	—	45,598	—	34,000
Australia—										
New South Wales	—	—	—	—	—	—	—	41,457	13,859	—
Queensland	5	9,387	16,631	2,532	—	—	—	7,197	22,794	16,635
Canada	471,273	192,254	838	225,366	607,320	5,392	27,490	82,332	122,934	429,324
British West India Islands	1,196,241	1,736,394	1,204,601	1,908,313	2,250,293	1,399,727	1,444,197	1,276,994	1,500,953	1,407,154
British Guiana	3,123,248	2,5[illegible]8,947	3,115,898	2,889,449	3,850,632	3,429,442	2,876,454	2,319,806	3,205,726	2,920,132
Other British Possessions	14,216	24,799	8,617	87,016	50,008	147	—	85	529	—
Total from British Possessions	4,901,675	4,619,359	4,762,300	5,368,756	6,794,642	4,834,708	4,348,141	3,793,687	4,901,322	4,906,898
Total	5,469,092	5,577,678	6,196,547	6,692,601	8,188,235	5,485,161	4,704,188	4,198,647	5,199,819	5,498,451

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

IMPORTS OF RUM—*continued.*

(*b*) TABLE showing the VALUES of Rum imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906	1907.
	£	£	£	£	£	£	£	£	£	£
Germany	—	—	1,309	1,489	1,308	3	—	2,202	2	—
Netherlands	—	—	22,893	21,466	11,049	12,463	6,420	977	2,736	2,133
Dutch Guiana	—	—	2,052	2,595	—	—	145	—	—	1,350
France	—	—	11,524	38,907	44,265	15,788	5,793	8,428	9,018	19,800
United States of America	—	—	77,888	17,402	33,251	6,286	5,484	7,430	3,857	3,563
Other Foreign Countries	—	—	179	1,475	481	50	55	—	186	203
Total from Foreign Countries	—	—	115,845	83,334	90,354	34,590	17,897	19,037	15,799	27,049
British South Africa	—	—	—	—	—	—	—	1,183	2,215	6,187
Mauritius and Dependencies	—	—	23,696	13,040	1,663	—	—	2,158	—	1,322
Australia—										
New South Wales	—	—	—	—	—	—	—	1,431	425	—
Queensland	—	—	1,126	192	—	—	—	900	1,382	950
Canada	—	—	50	14,885	28,912	190	2,028	6,247	8,816	38,264
British West India Islands	—	—	105,446	207,071	233,276	136,180	131,744	112,873	138,435	130,864
British Guiana	—	—	235,333	183,788	167,237	130,902	100,692	114,677	156,164	154,472
Other British Possessions	—	—	636	5,159	2,483	12	—	20	40	—
Total from British Possessions	—	—	366,287	424,135	433,571	267,284	234,464	239,489	307,477	332,059
Total	—	—	482,132	507,469	523,925	301,874	252,361	258,526	323,276	359,108

Imported in Bottles.

Foreign Countries	—	—	232	71	137	21	1	7	19	5
British Possessions	—	—	164	367	92	168	101	90	56	83
Totals	—	—	396	438	229	189	102	97	75	88

Total Importations in Casks and Bottles.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Germany	350	6,028	1,316	1,493	1,313	3	1	2,203	2	—
Netherlands	1,652	7,186	22,893	21,466	11,053	12,463	6,420	977	2,736	2,133
Dutch Guiana	2,527	2,370	2,052	2,595	—	—	145	—	—	1,350
France	7	30,866	11,524	38,954	44,371	15,798	5,793	8,431	9,018	19,801
United States of America	52,177	16,452	77,889	17,406	33,273	6,286	5,484	7,433	3,857	3,563
Other Foreign Countries	348	5,878	403	1,491	481	61	55	—	205	207
Total from Foreign Countries	57,061	68,780	116,077	83,405	90,491	34,611	17,898	19,044	15,818	27,054
British South Africa	—	—	—	—	—	—	—	1,183	2,215	6,237
Mauritius and Dependencies	3,359	15,445	23,696	13,040	1,663	—	—	2,158	—	1,322
Australia—										
New South Wales	—	—	—	—	—	—	—	1,431	425	—
Queensland	1	810	1,126	192	—	—	—	900	1,382	950
Canada	42,973	16,518	105	14,885	28,912	190	2,028	6,254	8,816	38,264
British West India Islands	106,223	138,968	105,495	207,179	233,368	136,301	131,845	112,956	138,488	130,897
British Guiana	135,627	126,545	235,333	183,788	167,237	130,902	100,692	114,677	156,164	154,472
Other British Possessions	672	1,364	696	5,418	2,483	59	—	20	43	—
Total from British Possessions	288,855	299,650	366,451	424,502	433,663	267,452	234,565	239,579	307,533	332,142
Total	345,916	368,430	482,528	507,907	524,154	302,063	252,463	258,623	323,351	359,196

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

III.—IMPORTS OF IMITATION RUM—QUANTITIES AND VALUES.

(a) TABLE showing the QUANTITIES, in proof gallons, of Imitation Rum imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	Gall.	Gall.	Gall	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Germany	—	—	40,370	24,388	19,302	12,699	11,930	10,389	11,496	11,491
France	—	—	—	—	—	2,303	2,307	2,930	1,504	1,032
Other Foreign Countries	—	—	2,182	2,173	2,921	586	85	1,075	851	374
Total from Foreign Countries	—	—	42,552	26,561	22,223	15,588	14,322	14,394	13,851	12,897
From British Possessions	—	—	—	112	—	437	—	3,127	—	32
Total	—	—	42,552	26,673	22,223	16,025	14,322	17,521	13,851	12,929

Imported in Bottles.

From Foreign Countries	—	—	64	178	206	249	264	279	189	637
From British Possessions	—	—	18	—	4	1	—	—	—	—
Total	—	—	82	178	210	250	264	279	189	637

Total Importations in Casks and Bottles.

Germany	15,863	48,677	40,372	24,392	19,312	12,704	11,950	10,390	11,499	11,538
France	1,065	862	262	1,565	2,690	2,541	2,542	3,198	1,655	1,519
Other Foreign Countries	369	142	1,982	782	427	592	94	1,085	886	477
Total from Foreign Countries	17,297	49,681	42,616	26,739	22,429	15,837	14,586	14,673	14,040	13,534
From British Possessions	28	—	18	112	4	438	—	3,127	—	32
Total	17,325	49,681	42,634	26,851	22,433	16,275	14,586	17,800	14,040	13,566

(b) TABLE showing the VALUES of Imitation Rum imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Germany	—	—	3,110	1,557	1,381	878	867	710	838	833
France	—	—	—	—	—	406	512	456	263	228
Other Foreign Countries	—	—	310	385	481	120	23	79	272	50
Total from Foreign Countries	—	—	3,420	1,942	1,862	1,404	1,402	1,245	1,373	1,111
From British Possessions	—	—	—	14	—	69	—	192	—	3
Total	—	—	3,420	1,956	1,862	1,473	1,402	1,437	1,373	1,114

Imported in Bottles.

From Foreign Countries	—	—	40	87	107	151	275	212	158	691
From British Possessions	—	—	10	—	2	—	—	—	—	—
Total	—	—	50	87	109	151	275	212	158	691

Total Importations in Casks and Bottles.

Germany	921	3,112	3,110	1,558	1,387	880	878	710	839	847
France	332	268	86	333	513	553	775	662	408	852
Other Foreign Countries	29	41	264	138	69	122	24	85	284	103
Total from Foreign Countries	1,282	3,421	3,460	2,029	1,969	1,555	1,677	1,457	1,531	1,802
From British Possessions	7	—	10	14	2	69	—	192	—	3
Total	1,289	3,421	3,470	2,043	1,971	1,624	1,677	1,649	1,531	1,805

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

IV.—IMPORTS OF GENEVA—QUANTITIES AND VALUES.

(*a*) TABLE showing the QUANTITIES, in proof gallons, of Geneva imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Netherlands	—	—	178,874	195,598	183,847	188,097	189,442	196,144	207,979	215,343
Belgium	—	—	3,449	4,829	5,160	6,100	6,444	6,071	5,792	6,200
Other Foreign Countries	—	—	238	549	415	746	136	137	8	21
Total from Foreign Countries	—	—	182,561	200,976	189,422	194,943	196,022	202,352	213,779	221,564
From British Possessions	—	—	—	—	208	—	—	—	—	—
Total	—	—	182,561	200,976	189,630	194,943	196,022	202,352	213,779	221,564

Imported in Bottles.

Netherlands	—	—	229,556	230,198	230,269	229,064	220,135	224,203	217,023	221,384
Other Foreign Countries	—	—	906	143	347	449	471	1,448	597	1,149
Total from Foreign Countries	—	—	230,462	230,341	230,616	229,513	220,606	225,651	217,620	222,533
From British Possessions	—	—	19	28	2,002	2	—	43	37	10
Total	—	—	230,481	230,369	232,618	229,515	220,606	225,694	217,657	222,543

Total Importations in Casks and Bottles.

Netherlands	348,363	407,977	408,430	425,796	414,116	417,161	409,577	420,347	425,002	436,727
Belgium	3,699	3,139	3,546	4,844	5,163	6,309	6,449	6,071	5,812	6,218
Other Foreign Countries	242	453	1,047	677	759	986	602	1,585	585	1,152
Total from Foreign Countries	352,304	411,569	413,023	431,317	420,038	424,456	416,628	428,003	431,399	444,097
From British Possessions	32	1	19	28	2,210	2	—	43	37	10
Total	352,336	411,570	413,042	431,345	422,248	424,458	416,628	428,046	431,436	444,107

(*b*) TABLE showing the VALUES of Geneva imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Netherlands	—	—	21,226	20,797	19,809	21,662	19,389	19,999	19,808	20,544
Belgium	—	—	391	565	607	723	760	645	695	738
Other Foreign Countries	—	—	35	57	82	75	14	15	1	4
Total from Foreign Countries	—	—	21,652	21,419	20,498	22,460	20,163	20,659	20,504	21,286
From British Possessions	—	—	—	—	40	—	—	—	—	—
Total	—	—	21,652	21,419	20,538	22,460	20,163	20,659	20,504	21,286

Imported in Bottles.

Netherlands	—	—	44,501	44,319	45,385	44,925	42,890	41,025	40,798	42,521
Other Foreign Countries	—	—	178	39	89	74	83	388	222	421
Total from Foreign Countries	—	—	44,679	44,358	45,474	44,999	42,973	41,413	41,020	42,942
From British Possessions	—	—	4	14	528	2	—	15	4	2
Total	—	—	44,683	44,372	46,002	45,001	42,973	41,428	41,024	42,944

Total Importations in Casks and Bottles.

Netherlands	62,363	67,320	65,727	65,116	65,194	66,587	62,279	61,024	60,606	63,065
Belgium	521	474	411	568	608	760	762	645	710	743
Other Foreign Countries	52	71	193	93	170	112	95	403	208	420
Total from Foreign Countries	62,936	67,865	66,331	65,777	65,972	67,459	63,136	62,072	61,524	64,228
From British Possessions	22	1	4	14	568	2	—	15	4	2
Total	62,958	67,866	66,335	65,791	66,540	67,461	63,136	62,087	61,528	64,230

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

V.—IMPORTS OF LIQUEURS, CORDIALS, &c.—QUANTITIES AND VALUES.

(a) TABLE showing the QUANTITIES, in liquid gallons, of Liqueurs, Cordials, &c. (not tested), imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Foreign Countries	—	—	636	530	261	942	274	86	113	410
British Possessions	—	—	—	—	—	—	—	—	5	—
Total	—	—	636	530	261	942	274	86	118	410

Imported in Bottles.

Germany	—	—	687	935	1,080	1,013	1,190	800	859	829
Netherlands	—	—	836	598	1,091	2,175	2,623	2,209	992	1,491
Belgium	—	—	206	215	160	171	158	186	301	215
France	—	—	9,685	12,633	10,836	10,192	9,023	9,230	9,504	9,958
United States of America	—	—	1,488	765	1,199	1,294	2,407	3,786	1,939	1,400
Other Foreign Countries	—	—	536	813	493	2,051	544	569	581	809
Total from Foreign Countries	—	—	13,438	15,959	14,859	16,896	15,945	16,780	14,176	14,702
British West India Islands	—	—	1,049	116	983	55	3	29	177	—
Other British Possessions	—	—	87	10	52	36	57	32	80	100
Total from British Possessions	—	—	1,136	126	1,035	91	60	61	257	100
Total	—	—	14,574	16,085	15,894	16,987	16,005	16,841	14,433	14,802

Total Importations in Casks and Bottles.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Germany	1,873	1,639	1,093	960	1,729	1,688	1,252	800	859	829
Netherlands	1,092	1,178	836	607	1,091	2,331	2,739	2,286	1,018	1,491
Belgium	167	206	239	215	171	171	158	186	301	215
France	6,918	9,089	9,691	12,633	10,836	10,194	9,023	9,230	9,545	10,246
United States of America	993	1,417	1,679	1,257	1,199	1,294	2,407	3,786	1,939	1,400
Other Foreign Countries	967	833	536	817	494	2,160	640	578	627	931
Total from Foreign Countries	12,010	14,362	14,074	16,489	15,120	17,838	16,219	16,866	14,289	15,112
British West India Islands	203	64	1,049	116	983	55	3	29	182	—
Other British Possessions	678	147	87	10	52	36	57	32	80	100
Total from British Possessions	881	211	1,136	126	1,035	91	60	61	262	100
Total	12,891	14,573	15,210	16,615	16,155	17,929	16,279	16,927	14,551	15,212

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

IMPORTS OF LIQUEURS, CORDIALS, &c.—*continued.*

(*b*) TABLE showing the VALUES of Liqueurs, Cordials, &c. (not tasted), imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Foreign Countries	—	—	156	209	143	700	111	62	42	335
British Possessions	—	—	—	—	—	—	—	—	1	—
Total	—	—	156	209	143	700	111	62	43	335

Imported in Bottles.

Germany	—	—	827	887	1,198	1,103	1,147	1,004	1,236	1,357
Netherlands	—	—	1,059	614	1,453	1,893	2,541	2,168	1,291	1,678
Belgium	—	—	531	406	359	361	305	307	571	456
France	—	—	14,743	18,869	18,596	16,261	15,388	15,863	15,440	17,312
United States of America	—	—	4,246	3,116	4,115	6,209	6,352	8,741	4,709	4,280
Other Foreign Countries	—	—	493	706	412	1,007	444	495	547	728
Total from Foreign Countries	—	—	21,899	24,598	26,133	26,834	26,177	28,578	23,794	25,811
British West India Islands	—	—	1,108	154	1,500	71	1	38	222	—
Other British Possessions	—	—	210	8	61	68	146	50	129	125
Total from British Possessions	—	—	1,318	162	1,561	139	147	88	351	125
Total	—	—	23,217	24,760	27,694	26,973	26,324	28,666	24,145	25,936

Total Importations in Casks and Bottles.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Germany	1,126	1,055	888	891	1,298	1,675	1,162	1,004	1,236	1,357
Netherlands	1,249	1,573	1,059	616	1,453	1,980	2,621	2,227	1,306	1,678
Belgium	255	251	548	406	399	361	305	307	571	456
France	13,562	14,788	14,746	18,869	18,596	16,264	15,388	15,863	15,444	17,622
United States of America	3,452	3,093	4,321	3,317	4,115	6,209	6,352	8,741	4,709	4,280
Other Foreign Countries	827	635	493	708	415	1,045	460	498	570	753
Total from Foreign Countries	20,471	21,395	22,055	24,807	26,276	27,534	26,288	28,640	23,836	26,146
British West India Islands	300	99	1,108	154	1,500	71	1	38	223	—
Other British Possessions	784	192	210	8	61	68	146	50	129	125
Total from British Possessions	1,084	291	1,318	162	1,561	139	147	88	352	125
Total	21,555	21,686	23,373	24,969	27,837	27,673	26,435	28,728	24,188	26,271

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

VI.—IMPORTS OF UNENUMERATED SWEETENED SPIRITS.—QUANTITIES AND VALUES.

(a) TABLE showing the QUANTITIES, in proof gallons, of Sweetened Spirits, Unenumerated, imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Germany	—	—	9,604	10,085	4,100	1,007	1,542	1,415	1,763	4,381
Netherlands	—	—	912	849	1,042	693	946	853	1,191	1,017
Belgium	—	—	229	315	322	328	213	284	308	369
France	—	—	1,673	3,588	3,343	2,668	2,641	2,688	3,188	2,853
United States of America	—	—	3,710	4,401	2,953	1,823	3,081	3,050	3,816	3,090
Other Foreign Countries	—	—	404	470	384	629	414	820	522	1,063
Total from Foreign Countries	—	—	16,532	19,708	12,144	7,148	8,837	9,110	10,788	12,773
From British Possessions	—	—	29	91	16	155	98	188	55	168
Total	—	—	16,561	19,799	12,160	7,303	8,935	9,298	10,843	12,941

Imported in Bottles.

Russia	—	—	3,893	6,897	6,354	6,041	5,603	6,785	6,614	6,300
Denmark	—	—	2,896	2,996	3,210	2,983	3,221	3,249	2,955	3,225
Germany	—	—	8,384	7,438	8,844	7,398	7,620	7,810	8,003	8,112
Netherlands	—	—	6,377	7,376	7,518	7,538	6,016	5,960	6,121	6,057
Belgium	—	—	478	978	1,577	9,901	793	756	595	845
France	—	—	40,705	42,502	61,893	48,493	41,952	45,287	46,692	49,328
Italy	—	—	1,754	281	152	596	205	132	240	172
Austria-Hungary	—	—	3,009	3,389	3,136	3,075	2,879	2,962	2,904	3,722
United States of America	—	—	10,427	11,662	11,271	12,652	14,858	11,505	11,504	14,548
Other Foreign Countries	—	—	420	665	733	734	5,001	8,084	7,489	6,698
Total from Foreign Countries	—	—	78,343	84,184	104,688	99,411	88,148	92,530	93,117	99,007
British West India Islands	—	—	6,999	7,755	6,880	6,657	7,323	6,746	8,013	6,110
Other British Possessions	—	—	33	186	3,507	193	464	836	842	635
Total from British Possessions	—	—	7,032	7,941	10,387	6,850	7,787	7,582	8,855	6,745
Total	—	—	85,375	92,125	115,075	106,261	95,935	100,112	101,972	105,752

Total Importations in Casks and Bottles.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Russia	6,396	6,655	3,961	6,897	6,354	6,045	5,603	7,004	6,614	6,300
Denmark	3,123	3,673	2,934	3,080	3,324	3,103	3,333	3,329	3,045	3,851
Germany	16,445	14,308	17,988	17,523	12,944	8,405	9,162	9,225	9,766	12,493
Netherlands	7,772	7,799	7,289	8,225	8,560	8,231	6,962	6,813	7,312	7,074
Belgium	1,133	1,329	707	1,293	1,899	10,229	1,006	1,040	903	1,214
France	49,407	53,551	42,378	46,090	65,236	51,161	44,593	47,975	49,880	52,181
Italy	922	665	1,920	307	211	708	285	164	276	278
Austria-Hungary	3,058	3,239	3,009	3,685	3,136	3,075	2,879	3,102	2,904	3,803
United States of America	10,578	12,936	14,137	16,063	14,224	14,475	17,939	14,555	15,320	17,638
Other Foreign Countries	1,394	872	552	729	944	1,127	5,223	8,433	7,885	6,948
Total from Foreign Countries	100,228	105,027	94,875	103,892	116,832	106,559	96,985	101,640	103,905	111,780
British West India Islands	8,148	8,027	6,999	7,794	6,896	6,671	7,421	6,885	8,020	6,118
Other British Possessions	182	207	62	238	3,507	334	464	885	890	795
Total from British Possessions	8,330	8,234	7,061	8,032	10,403	7,005	7,885	7,770	8,910	6,913
Total	108,558	113,261	101,936	111,924	127,235	113,564	104,870	109,410	112,815	118,693

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

IMPORTS OF UNENUMERATED SWEETENED SPIRITS—*continued.*

(*b.*)—TABLE showing the VALUES of Sweetened Spirits, Unenumerated, imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.[1]	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Germany	—	—	4,705	5,043	2,008	690	681	1,023	892	1,565
Netherlands	—	—	637	610	680	717	896	805	1,007	752
Belgium	—	—	217	390	227	790	269	235	283	411
France	—	—	2,877	5,518	5,992	4,931	3,834	4,940	5,049	4,919
United States of America	—	—	6,435	6,665	4,374	3,709	4,242	4,909	5,623	6,294
Other Foreign Countries	—	—	194	209	278	268	177	679	273	393
Total from Foreign Countries	—	—	15,065	18,435	13,659	11,105	10,099	12,591	13,127	14,334
From British Possessions	—	—	13	32	63	35	29	41	222	115
Total	—	—	15,078	18,467	13,722	11,140	10,128	12,632	13,349	14,449

Imported in Bottles.

Russia	—	—	4,460	7,687	7,379	6,898	6,489	7,932	8,470	7,404
Denmark	—	—	4,691	4,891	5,315	4,701	5,012	5,239	4,817	5,211
Germany	—	—	9,407	9,228	11,517	10,266	10,415	11,151	11,061	14,740
Netherlands	—	—	11,639	12,052	12,959	14,922	15,681	12,968	7,501	7,962
Belgium	—	—	1,104	2,121	1,770	15,529	1,507	1,513	1,177	2,137
France	—	—	62,460	65,657	92,949	69,849	61,833	68,931	69,886	74,456
Italy	—	—	1,154	249	185	952	260	171	208	263
Austria-Hungary	—	—	6,035	6,552	6,064	4,655	5,365	5,535	5,238	6,848
United States of America	—	—	75,375	75,528	82,381	85,687	90,824	81,430	86,486	112,560
Other Foreign Countries	—	—	601	742	832	1,069	9,100	12,838	14,008	10,568
Total from Foreign Countries	—	—	176,326	184,707	221,351	214,528	206,486	207,708	208,852	242,149
British West India Islands	—	—	11,538	14,411	12,397	12,060	12,676	11,968	14,071	10,902
Other British Possessions	—	—	328	646	1,958	415	641	6,893	1,422	895
Total from British Possessions	—	—	11,866	15,057	14,355	12,475	13,317	18,861	15,493	11,797
Total	—	—	188,192	199,764	235,706	227,003	219,803	226,569	224,345	253,946

Total Importations in Casks and Bottles.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Russia	6,727	6,875	4,475	7,687	7,379	6,903	6,489	8,197	8,470	7,404
Denmark	5,212	5,405	4,712	4,913	5,352	4,753	5,074	5,281	4,863	5,371
Germany	11,458	10,924	14,112	14,271	13,525	10,956	11,096	12,174	11,953	16,305
Netherlands	11,221	10,646	11,676	12,662	13,639	15,639	16,577	13,773	8,508	8,714
Belgium	1,404	1,824	1,321	2,511	2,097	16,319	1,776	1,748	1,460	2,548
France	78,346	82,438	65,337	71,175	98,941	74,780	65,667	73,871	74,935	79,375
Italy	489	471	1,188	273	240	988	295	193	249	328
Austria-Hungary	5,553	6,090	6,035	6,682	6,064	4,655	5,365	5,645	5,238	6,900
United States of America	54,924	71,907	81,810	82,193	86,755	89,396	95,066	86,339	92,109	118,854
Other Foreign Countries	1,622	813	725	775	1,018	1,244	9,180	13,078	14,194	10,684
Total from Foreign Countries	176,956	197,393	191,391	203,142	235,010	225,633	216,585	220,299	221,979	256,483
British West India Islands	13,591	14,047	11,538	14,431	12,460	12,075	12,705	11,998	14,074	10,908
Other British Possessions	545	823	341	658	1,958	435	641	6,909	1,641	1,004
Total from British Possessions	14,136	14,870	11,879	15,089	14,418	12,510	13,346	18,902	15,715	11,912
Total	191,092	212,263	203,270	218,231	249,428	238,143	229,931	239,201	237,694	268,395

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

VII.—IMPORTS OF UNENUMERATED UNSWEETENED SPIRITS.—QUANTITIES AND VALUES.

(*a*) TABLE showing the QUANTITIES, in proof gallons, of Unsweetened Spirits, Unenumerated, imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Russia	—	—	—	—	—	—	42,263	3,319	—	—
Denmark	—	—	42,630	27,458	33,705	5,102	691	705	863	1,109
Germany	—	—	1,171,696	1,740,822	3,089,210	1,807,596	337,683	185,112	425,930	434,805
Netherlands	—	—	35,689	25,784	7,009	14,825	6,976	4,070	2,785	5,853
Belgium	—	—	147,964	183,973	16,750	23,392	34,278	7,662	2,956	47
France	—	—	1,170	906	2,045	1,291	6,613	6,511	6,080	5,143
United States of America	—	—	2,076	4,333	5,997	26,382	3,412	3,347	3,914	6,120
Other Foreign Countries	—	—	2,004	2,659	3,240	3,237	3,038	4,287	8,300	5,654
Total from Foreign Countries	—	—	1,403,229	1,985,935	3,157,956	1,881,825	434,954	215,013	450,828	458,731
Channel Islands	—	—	—	—	—	249	9,605	297	—	7
Other British Possessions	—	—	—	—	—	94	1,356	11,484	995	4,020
Total from British Possessions	—	—	1,868	151	2,336	343	10,961	11,781	995	4,027
Total	—	—	1,405,097	1,986,086	3,160,292	1,882,168	445,915	226,794	451,823	462,758

Imported in Bottles.

Germany	—	—	2,199	584	699	1,173	1,153	1,822	984	2,179
Netherlands	—	—	604	223	126	190	414	337	320	567
Belgium	—	—	114	66	6,161	7,152	2,149	29	37	46
France	—	—	6,499	4,385	506	1,105	241	183	257	419
United States of America	—	—	13,074	9,215	13,947	13,972	3,705	2,329	796	2,638
Other Foreign Countries	—	—	356	662	2,501	692	1,421	747	255	647
Total from Foreign Countries	—	—	22,846	15,135	23,940	24,284	9,083	5,447	2,649	6,496
From British Possessions	—	—	1,967	773	497	647	10,715	7,024	7,206	5,906
Total	—	—	24,813	15,908	24,437	24,931	19,798	12,471	9,855	12,402

Total Importations in Casks and Bottles.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Russia	—	—	—	—	—	—	42,274	3,361	—	—
Denmark	21,010	38,074	42,688	27,651	33,798	5,412	745	796	955	1,231
Germany	815,157	1,125,611	1,173,895	1,741,406	3,089,909	1,808,769	338,836	186,934	426,914	436,984
Netherlands	37,692	27,051	36,293	26,007	7,135	15,015	7,390	4,407	3,105	6,420
Belgium	17,941	24,200	148,078	184,039	22,911	30,544	36,427	7,691	2,993	93
France	72,902	14,842	7,669	5,291	2,551	2,396	6,854	6,694	6,337	5,562
United States of America	5,483	13,933	15,150	13,548	19,944	40,354	7,117	5,676	4,710	8,758
Other Foreign Countries	33,423	9,038	2,302	3,128	5,648	3,619	4,394	4,901	8,463	6,179
Total from Foreign Countries	1,003,608	1,252,749	1,426,075	2,001,070	3,181,896	1,906,109	444,037	220,460	453,477	465,227
Channel Islands	—	—	—	—	—	347	9,705	415	79	93
Other British Possessions	—	—	—	—	—	643	11,971	18,390	8,122	9,840
Total from British Possessions	12,185	5,619	3,835	924	2,833	990	21,676	18,805	8,201	9,933
Total	1,015,793	1,258,368	1,429,910	2,001,994	3,184,729	1,907,099	465,713	239,265	461,678	475,160

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

IMPORTS OF UNENUMERATED UNSWEETENED SPIRITS—*continued.*

(*b*) TABLE showing the VALUES of Unsweetened Spirits, Unenumerated, imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Russia	—	—	—	—	—	—	1,990	147	—	—
Denmark	—	—	1,855	1,152	1,141	303	225	153	141	182
Germany	—	—	55,249	67,271	88,083	63,471	18,946	12,882	22,296	21,968
Netherlands	—	—	1,766	1,358	341	779	412	532	505	500
Belgium	—	—	6,493	5,915	958	816	1,615	322	69	27
France	—	—	342	306	1,176	373	1,155	1,271	1,335	1,420
United States of America	—	—	882	1,833	4,288	5,459	1,667	1,627	2,085	2,285
Other Foreign Countries	—	—	587	606	691	581	1,271	1,024	2,295	1,583
Total from Foreign Countries	—	—	67,174	78,441	96,678	71,782	27,281	17,958	28,726	27,965
Channel Islands	—	—	—	—	—	17	385	63	—	9
Other British Possessions	—	—	—	—	—	57	688	1,145	252	847
Total from British Possessions	—	—	113	62	462	74	1,073	1,208	252	856
Total	—	—	67,287	78,503	97,140	71,856	28,354	19,166	28,978	28,821

Imported in Bottles.

Germany	—	—	563	261	448	1,083	1,180	1,462	1,164	1,440
Netherlands	—	—	480	154	89	130	187	168	150	284
Belgium	—	—	57	36	3,509	4,307	937	39	148	48
France	—	—	3,551	2,491	358	554	196	180	313	851
United States of America	—	—	6,955	5,699	8,085	7,408	2,371	3,277	868	2,481
Other Foreign Countries	—	—	228	416	1,739	251	827	397	191	453
Total from Foreign Countries	—	—	11,834	9,057	14,228	13,733	5,698	5,523	2,834	5,557
From British Possessions	—	—	695	486	418	562	6,443	4,550	4,296	3,905
Total	—	—	12,529	9,543	14,646	14,295	12,141	10,073	7,130	9,462

Total Importations in Casks and Bottles.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Russia	—	—	—	—	—	—	1,997	179	—	—
Denmark	1,154	2,328	1,874	1,254	1,217	349	244	243	219	294
Germany	41,339	55,626	55,812	67,532	88,531	64,554	20,126	14,544	23,460	23,408
Netherlands	2,184	1,904	2,246	1,512	430	909	599	700	655	784
Belgium	793	935	6,550	5,951	4,467	5,123	2,552	361	217	75
France	6,770	8,068	3,893	2,797	1,534	927	1,351	1,451	1,648	2,271
United States of America	1,467	7,695	7,837	7,532	12,373	12,867	4,038	4,904	2,953	4,766
Other Foreign Countries	1,896	1,143	796	920	2,354	786	2,072	1,299	2,408	1,924
Total from Foreign Countries	55,603	77,699	79,008	87,498	110,906	85,515	32,979	23,481	31,560	33,522
Channel Islands	—	—	—	—	—	85	450	154	49	56
Other British Possessions	5,963	3,496	808	548	880	551	7,066	5,604	4,499	4,705
Total from British Possessions	5,963	3,496	808	548	880	636	7,516	5,758	4,548	4,761
Total	61,566	81,195	79,816	88,046	111,786	86,151	40,495	29,239	36,108	38,283

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

VIII.—IMPORTS OF PERFUMED SPIRITS—QUANTITIES AND VALUES.

(*a*) TABLE showing the QUANTITIES, in liquid gallons, of Perfumed Spirits imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
France	—	—	4,219	5,974	5,238	4,713	5,130	5,159	4,961	3,768
Other Foreign Countries	—	—	131	194	147	311	406	377	411	882
Total from Foreign Countries	—	—	4,350	6,168	5,385	5,024	5,536	5,536	5,372	4,650
From British Possessions	—	—	—	—	65	—	—	—	—	—
Total	—	—	4,350	6,168	5,450	5,024	5,536	5,536	5,372	4,650

Imported in Bottles.

Germany	—	—	794	790	588	521	333	451	255	158
Netherlands	—	—	17,866	16,610	17,225	17,061	16,335	15,896	16,455	14,647
Belgium	—	—	6,398	7,797	5,359	6,993	6,384	6,090	6,714	7,712
France	—	—	22,065	21,556	20,989	21,043	17,527	12,316	10,247	9,908
United States of America	—	—	1,387	1,702	1,494	1,509	1,476	1,681	1,481	1,592
Other Foreign Countries	—	—	29	3	57	40	30	4	24	9
Total from Foreign Countries	—	—	48,539	48,458	45,712	47,167	42,085	36,438	35,176	34,026
Channel Islands	—	—	687	557	530	590	575	513	486	460
Other British Possessions	—	—	14	29	10	134	48	27	51	8
Total from British Possessions	—	—	701	586	540	724	623	540	537	468
Total	—	—	49,240	49,044	46,252	47,891	42,708	36,978	35,713	34,494

Total Importations in Casks and Bottles.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Germany	898	818	794	814	588	586	333	471	257	189
Netherlands	19,426	19,079	17,866	16,610	17,287	17,307	16,586	16,251	16,864	15,249
Belgium	5,072	5,254	6,529	7,967	5,444	6,993	6,539	6,092	6,714	7,961
France	27,692	28,283	26,284	27,530	26,227	25,756	22,657	17,475	15,208	13,676
United States of America	1,646	1,879	1,387	1,702	1,494	1,509	1,476	1,681	1,481	1,592
Other Foreign Countries	6	11	29	3	57	40	30	4	24	9
Total from Foreign Countries	54,740	55,324	52,889	54,626	51,097	52,191	47,621	41,974	40,548	38,676
Channel Islands	1,162	1,072	687	557	530	590	575	513	486	460
Other British Possessions	92	189	14	29	75	134	48	27	51	8
Total from British Possessions	1,254	1,261	701	586	605	724	623	540	537	468
Total	55,994	56,585	53,590	55,212	51,702	52,915	48,244	42,514	41,085	39,144

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

IMPORTS OF PERFUMED SPIRITS—*continued.*

(*b*) TABLE showing the VALUES of Perfumed Spirits imported into the United Kingdom during the Ten Years, 1898 to 1907.

Imported in Casks.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
France	—	—	12,632	18,031	15,445	14,923	15,977	15,006	14,430	11,189
Other Foreign Countries	—	—	546	710	404	302	472	399	422	897
Total from Foreign Countries	—	—	13,178	18,741	15,849	15,225	16,449	15,405	14,852	12,086
From British Possessions	—	—	—	—	33	—	—	—	—	—
Total	—	—	13,178	18,741	15,882	15,225	16,449	15,405	14,852	12,086

Imported in Bottles.

Germany	—	—	968	1,002	972	931	759	826	669	399
Netherlands	—	—	32,484	31,877	30,626	29,322	26,791	27,838	27,451	24,722
Belgium	—	—	15,117	18,677	10,652	13,583	11,740	11,400	13,510	15,553
France	—	—	64,193	65,344	68,650	67,714	59,987	43,099	37,841	36,055
United States of America	—	—	2,163	2,701	2,607	2,599	3,095	2,983	2,588	2,560
Other Foreign Countries	—	—	200	34	146	296	63	25	123	37
Total from Foreign Countries	—	—	115,125	119,635	113,653	114,445	102,435	86,171	82,182	79,326
Channel Islands	—	—	1,090	919	896	1,033	1,065	958	881	845
Other British Possessions	—	—	33	54	35	723	315	80	142	47
Total British Possessions	—	—	1,123	973	931	1,756	1,380	1,038	1,023	892
Total	—	—	116,248	120,608	114,584	116,201	103,815	87,209	83,205	80,218

Total Importations in Casks and Bottles.

Countries whence Imported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Germany	1,077	1,154	968	1,032	972	966	759	829	672	461
Netherlands	37,080	35,960	32,484	31,877	30,686	29,589	27,049	28,239	27,870	25,356
Belgium	12,307	12,370	15,663	19,357	10,996	13,583	11,954	11,404	13,510	15,754
France	78,176	79,870	76,825	83,375	84,095	82,637	75,964	58,105	52,271	47,244
United States of America	2,383	2,866	2,163	2,701	2,607	2,599	3,095	2,983	2,588	2,560
Other Foreign Countries	14	41	200	34	146	296	63	25	123	37
Total from Foreign Countries	131,037	132,261	128,303	138,376	129,502	129,670	118,884	101,576	97,034	91,412
Channel Islands	2,143	2,021	1,090	919	896	1,033	1,065	958	881	845
Other British Possessions	87	371	33	54	68	723	315	80	142	47
Total from British Possessions	2,230	2,392	1,123	973	964	1,756	1,380	1,038	1,023	892
Total	133,267	134,653	129,426	139,349	130,466	131,426	120,264	102,614	98,057	92,304

NOTE.—Imports in Casks and in Bottles were not separately recorded prior to 1900.

IX.—EXPORTS OF BRANDY, RUM, AND GENEVA.—QUANTITIES AND VALUES.

(*a*) TABLE showing the QUANTITIES, in proof gallons, of the undermentioned Enumerated Spirits, exported from the United Kingdom during the Ten Years, 1898 to 1907.

BRANDY.

Countries to which Exported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.	Gall.
Foreign Countries	19,430	24,004	24,887	22,030	16,595	18,530	52,575	69,173	38,997	25,410
British Possessions	34,242	30,627	38,327	38,438	27,134	34,276	33,218	23,576	28,903	33,981
Total	53,672	54,631	63,214	60,468	43,729	52,806	85,793	92,749	67,900	59,391

RUM.

Germany	322,261	357,477	394,341	274,017	315,847	299,159	308,771	354,171	360,355	434,343
Other Foreign Countries	241,600	282,553	260,103	238,144	250,280	249,102	261,282	218,636	193,727	221,331
Total to Foreign Countries	563,861	640,030	654,444	512,161	566,127	548,261	570,053	572,807	554,082	655,674
Australia	210,412	190,507	198,668	308,931	219,199	203,697	244,862	200,602	297,313	352,002
Other British Possessions	136,188	109,300	116,046	106,042	119,608	203,069	159,177	133,379	144,400	122,771
Total to British Possessions	346,600	299,807	314,714	414,973	338,807	406,766	404,039	333,981	441,713	474,773
Total	910,461	939,837	969,158	927,134	904,934	955,027	974,092	906,788	995,795	1,130,447

GENEVA.

Foreign Countries	1,678	2,708	3,344	780	2,588	9,949	6,496	5,836	3,450	2,115
British Possessions	8,818	11,525	12,341	14,233	10,988	10,045	8,343	6,798	8,383	10,148
Total	10,496	14,233	15,685	15,013	13,576	19,994	14,839	12,634	11,833	12,263

(*b*) TABLE showing the VALUES of the undermentioned Enumerated Spirits exported from the United Kingdom during the Ten Years, 1898 to 1907.

BRANDY.

Countries to which Exported.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.
	£	£	£	£	£	£	£	£	£	£
Foreign Countries	13,456	15,274	17,492	15,237	12,009	15,931	26,113	31,748	26,962	18,698
British Possessions	22,886	22,414	31,263	27,995	23,446	26,061	23,751	19,920	21,229	24,560
Total	36,342	37,688	48,755	43,232	35,455	41,992	49,864	51,668	48,191	43,258

RUM.

Germany	59,921	63,403	78,741	47,077	55,053	57,554	52,441	62,583	62,412	75,686
Other Foreign Countries	41,559	49,243	46,307	38,996	40,024	43,300	39,543	37,120	33,088	38,410
Total to Foreign Countries	101,480	112,646	125,048	86,073	95,077	100,854	91,984	99,703	95,500	114,096
Australia	23,658	21,129	28,384	37,120	24,164	21,086	24,318	19,561	28,415	35,709
Other British Possessions	18,911	18,992	26,150	19,216	18,437	27,808	21,328	21,352	20,542	19,729
Total to British Possessions	42,569	40,121	54,534	56,336	42,601	48,894	45,646	40,913	48,957	55,438
Total	144,049	152,767	179,582	142,409	137,678	149,748	137,630	140,616	144,457	169,534

GENEVA.

Foreign Countries	412	729	632	209	611	2,132	1,313	1,109	733	480
British Possessions	2,089	2,695	2,583	3,003	2,079	2,135	1,790	1,525	1,958	1,770
Total	2,501	3,424	3,215	3,212	2,690	4,267	3,103	2,634	2,691	2,250

X.—TABLE SHOWING THE QUANTITIES OF IMPORTED SPIRITS DELIVERED FOR HOME CONSUMPTION AND THE DUTY RECEIVED THEREON (EXCLUSIVE OF DUTY COLLECTED ON LOCAL TAXATION ACCOUNT) DURING THE LAST TEN FINANCIAL YEARS.

Description of Spirits.		1897–1898.	1898–1899.	1899–1900.	1900–1901.	1901–1902.	1902–1903.	1903–1904.	1904–1905.	1905–1906.	1906–1907.
Brandy	Quantity—proof gallons	2,573,692	2,613,011	2,885,623	2,572,031	2,310,665	2,321,070	2,195,053	2,168,829	2,055,411	2,093,924
	Duty received £	1,329,639	1,350,006	1,518,232	1,417,346	1,274,421	1,281,115	1,211,956	1,196,920	1,134,939	1,157,215
Rum	Quantity—proof gallons	3,986,519	4,094,833	4,726,668	4,292,035	4,057,250	4,098,474	4,123,917	3,955,054	3,954,989	4,292,083
Imitation Rum	Quantity—proof gallons	25,080	17,546	44,080	37,181	26,164	18,184	14,708	10,049	10,943	12,208
	Duty received on Rum and Imitation Rum £	2,072,658	2,124,728	2,470,802	2,344,908	2,211,811	2,229,873	2,241,769	2,147,752	2,148,217	2,331,491
Geneva	Quantity—proof gallons	331,799	339,959	386,553	359,320	361,176	388,811	394,526	386,131	392,738	403,621
	Duty received £	171,414	175,629	210,407	204,613	205,507	222,330	225,738	220,866	224,368	230,390
Foreign Spirits— Unenumerated, unsweetened	Quantity—proof gallons	1,248,004	970,099	1,160,167	1,296,777	1,449,316	1,629,924	1,240,815	*303,839	232,938	409,770
	Duty received £	644,688	501,103	600,675	702,303	785,104	888,729	677,679	166,260	127,683	224,356
Unenumerated, sweetened	Quantity—proof gallons	80,765	88,229	101,023	96,137	91,154	88,791	90,405	83,934	83,488	82,072
	Duty received £	41,708	45,572	55,845	55,956	53,727	53,156	54,219	50,250	50,081	49,311
Not tested	Quantity—liquid gallons	4,657	4,259	4,519	3,617	4,117	4,763	4,544	4,313	4,383	4,412
	Duty received £	3,250	2,972	3,362	2,819	3,213	3,718	3,544	3,363	3,429	3,433
Perfumed	Quantity—liquid gallons	41,794	41,308	43,390	41,757	38,836	38,653	37,418	38,163	37,217	37,927
	Duty received £	34,455	34,056	37,622	37,966	35,342	35,150	34,047	34,707	33,900	34,612
For methylating or use in art or manufacture under Section 8 of the Finance Act, 1902	Quantity—proof gallons	1,715	3,699	6,241	x110,357	643,202	†1,196,711	336,443	11,264	3,413	3,119
	Duty received £	29	61	104	1,839	10,720	23,661	7,009	234	71	53

x Cheap Foreign Plain Spirits.
* The remarkable diminution in 1904-5 and subsequent years is due to the smaller imports of German Plain Spirits.
† Deliveries duty free for use in art or manufacture under Section 8 of the Finance Act, 1902, commenced in the year 1902-3.

APPENDIX D.

Tables handed in by Mr. F. L. Teed.

TABLE I.

Results of the Analyses of "Strong Feints," "Strong Low Wines," "Mixture of Strong Low Wines and Strong Feints," and also of four new Whiskies from the same distillery.

	A	B	C	D	E	F	G
Acidity	7·3	19·1	31·6	34·5	13·4	20·2	10·1
Aldehydes	6·1	10·9	8·2	20·0	20·9	25·7	13·4
Furfural	0·7	0·4	2·1	0·5	0·6	0·5	0·6
Ethers	40·8	53·5	52·9	43·8	30·6	41·8	26·5
Higher alcohols	386·8	489·1	494·2	356·7	312·9	357·1	409·1
Sum of bye-products	441·7	573·0	589·0	455·5	378·4	445·3	459·7

All results in parts per 100,000 fluid parts of absolute alcohol.

A. Strong Feints.
B. Strong Low Wines.
C. Mixture of Strong Low Wines and Strong Feints.
D. and E. Whiskey.
F. New Whiskey (first stage).
G. „ (last stage).

TABLE II.

Average amounts of aldehydes.

New Irish Whiskey (5 distilleries)	22·5	Parts per 100,000 fluid parts of absolute alcohol.
New Lowland Malt (1 sample)	16·6	
New Patent Spirit (2 samples)	5·5	

TABLE III.

Index to Distilleries.

A. H. S. Persse, Ltd.
B. John Jameson & Son.
C. John Power & Son.
D. Geo. Roe & Co.
E. Dublin Whiskey Distillery.
F. Glen Grant Rothes.
G. Glen Grant Glenlivet.
H. Talisker.
I. Tobermory.
K. Long John.
L. Glenlivet.
M. Linlithgow.
N. North British.
O. Dublin Distillers Company.

Irish Whiskies.

(a.)

Distillery	A	A	A	A	A
Ref. No.	19	1	2	3	4
Age	New	New	4 years	7 years	10 years
Acidity	34·5	13·4	27·3	58·0	68·4
Aldehydes	20·0	20·9	8·3	7·3	11·0
Furfural	0·5	0·6	1·1	1·9	1·5
Ethers	43·8	30·6	39·6	38·7	41·5
Higher Alcohols	356·7	312·9	337·8	362·6	361·8
Coefficient of Impurities	455·5	378·4	414·1	468·5	484·2
Non-volatile Residue (per cent.)	0·00	0·00	0·08	0·12	0·12
Strength (actual)	46·1° O.P.	26·0° O.P.	22·3° U.P.	20·2° U.P.	20·1° U.P.

(b.)

Distillery	A	A	A
Ref. No.	7	21	22
Age	23 years	New (1st stage)	New (last stage)
Acidity	84·6	20·2	10·1
Aldehydes	55·7	25·7	13·4
Furfural	7·6	0·5	0·6
Ethers	58·6	41·8	26·5
Higher Alcohols	389·6	357·1	409·1
Coefficient of Impurities	596·1	445·3	459·7
Non-volatile Residue (per cent.)	0·14	0·00	0·00
Strength (actual)	5·6° U.P.	46·0° O.P.	45·6° O.P.

(c.)

Distillery	B	B	B	B
Ref. No.-	37	38	39	40
Age	New	4 years	7 years	10 years
Acidity	6·7	17·3	31·2	28·9
Aldehydes	12·6	21·6	33·3	35·2
Furfural-	5·3	3·6	4·1	4·3
Ethers	33·4	31·7	34·3	35·6
Higher Alcohols	341·8	378·8	406·5	412·4
Coefficient of Impurities	399·8	453·0	509·4	516·4
Non-volatile Residue (per cent.)	0·00	0·02	0·06	0·02
Strength (actual)	24·9° O.P.	21·5° O.P.	7·8° O.P.	2·0° O.P.

(d.)

Distillery	C	C	C	C
Ref. No.-	50	51	52	53
Age	New	3 years	5 years	7 years
Acidity	10·2	15·7	17·8	22·1
Aldehydes	26·4	23·4	33·3	24·7
Furfural	1·9	1·7	1·4	1·5
Ethers	31·0	26·9	29·3	31·0
Higher Alcohols	502·4	462·6	500·0	517·6
Coefficient of Impurities	571·9	530·3	581·8	596·9
Non-volatile Residue (per cent.)	0·00	0·00	0·00	0·04
Strength (actual)	24·2° O.P.	20·7° O.P.	18·3° O.P.	14·3° O.P.

(e.)

Distillery	D	D	D	D
Ref. No.-	42	45	46	47
Age	New	About 3 years	7 years	10 years
Acidity	5·0	36·5	41·6	41·8
Aldehydes	28·8	25·0	27·1	26·1
Furfural-	5·3	5·4	5·4	4·8
Ethers	21·6	31·5	42·1	42·3
Higher Alcohols	447·0	521·7	585·7	588·2
Coefficient of Impurities	507·7	620·1	701·9	703·2
Non-volatile Residue (per cent.)	0·00	0·02	0·06	0·08
Strength (actual)	24·9° O.P.	19·5° U.P.	19·2° U.P.	19·6° U.P.

(f.)

Distillery	E	E	E	E	Unknown
Ref. No.-	43	49	48	44	26 (Potheen)
Age	New	About 3 years	7 years	10 years	Unknown
Acidity	6·7	35·8	47·0	46·8	33·8
Aldehydes	24·3	21·3	23·3	27·1	30·0
Furfural	6·0	8·9	8·2	4·0	3·0
Ethers	22·9	44·1	40·2	52·4	68·1
Higher Alcohols	447·0	447·8	456·5	551·9	396·1
Coefficient of Impurities	506·9	557·9	575·2	682·2	531·0
Non-volatile Residue (per cent.)	0·00	0·04	0·08	0·12	0·04
Strength (actual)	25·0° O.P.	17·8° U.P.	19·5° U.P.	19·1° U.P.	0·5° U.P.

Scotch Whiskies (Highland).

(g.)

Distillery	F	G	H	I	K
Ref. No.-	5	6	8	9	10
Age	3 years	8 years	5 years	Fine old	7 years
Acidity	58·2	67·1	79·1	46·3	91·9
Aldehydes	17·3	28·1	22·3	15·4	21·3
Furfural	3·5	2·7	2·6	4·4	4·3
Ethers	83·8	67·7	111·6	31·5	55·3
Higher Alcohols	302·9	340·9	348·8	405·4	351·1
Coefficient of Impurities	465·7	506·5	564·4	503·0	523·9
Non-volatile Residue (per cent.)	0·12	0·16	0·14	0·14	0·16
Strength (actual)	8·5° O.P.	0·3° O.P.	9·5° U.P.	9·2° U.P.	17·7° U.P.

(h.)

Distillery	K	K	L	L	L
Ref. No.-	11	12	36	35	34
Age	10 years	23 years	3 years	4 years	8 years
Acidity	128·2	106·8	27·5	50·6	70·1
Aldehydes	40·0	22·7	24·5	28·1	25·8
Furfural	6·4	4·0	2·5	1·6	2·1
Ethers	90·2	61·4	61·2	80·0	59·8
Higher Alcohols	352·6	444·9	306·9	355·0	386·6
Coefficient of Impurities	617·4	639·8	422·6	515·3	544·4
Non-volatile Residue (per cent.)	0·16	0·26	0·04	0·06	0·18
Strength (actual)	18·0° U.P.	17·3° U.P.	7·0° O.P.	7·9° O.P.	2·0° O.P.

SCOTCH WHISKIES (LOWLAND).

(*i.*)

Distillery	M	M	M
Ref. No.	13	14	15
Age	New	4 years	11 years
Acidity	11·4	27·3	49·6
Aldehydes	16·6	10·9	35·3
Furfural	2·0	2·8	2·3
Ethers	21·5	25·6	43·0
Higher Alcohols	345·0	316·6	516·4
Coefficient of Impurities	396·5	383·2	646·6
Non-volatile Residue (per cent.)	0·02	0·02	0·10
Strength (actual)	11·1° O.P.	8·0° O.P.	1·8° O.P.

PATENT SPIRIT.

(*j.*)

Distillery	N	N	N	O	Unknown	Unknown
Ref. No.	16	17	18	41	28	27
Age	New	4 years	7 years	New	1 year	5 years
Acidity	5·7	21·3	62·3	6·7	9·6	19·7
Aldehydes	3·9	9·3	14·1	7·0	10·9	13·3
Furfural	trace	0·2	0·6	0·1	0·1	0·3
Ethers	19·4	21·3	35·1	17·1	18·2	28·8
Higher Alcohols	73·9	75·5	76·1	78·4	49·9	73·8
Coefficient of Impurities	102·9	127·6	188·2	109·3	88·7	135·9
Non-volatile Residue (per cent.)	0·00	0·10	0·12	0·00	0·02	0·04
Strength (actual)	11·4° O.P.	8·9° O.P.	7·9° O.P.	25·8° O.P.	9·4° O.P.	6·9° O.P.

(*k.*)

Distillery	Unknown	Unknown	Unknown	Unknown	Unknown
Ref. No.	30	29	31	32	33
Age	1 year	5 years	6 years	6 years	2 years
Acidity	4·1	26·6	26·9	62·5	11·3
Aldehydes	13·9	13·8	18·4	17·4	14·9
Furfural	0·2	0·4	0·3	0·3	0·0
Ethers	46·2	26·4	31·1	47·2	20·8
Higher Alcohols	99·5	74·2	75·2	76·4	51·1
Coefficient of Impurities	163·9	141·4	151·9	203·8	98·1
Non-volatile Residue (per cent.)	0·06	0·06	0·06	0·10	0·04
Strength (actual)	10·6° O.P.	13·8° O.P.	9·3° O.P.	7·5° O.P.	11·5° O.P.

(*l.*)

Distillery	Comber	Cambus		Old Taylor (Bourbon)	American Rye
		1899.	1905.		
Acidity	40·6	20·2	7·7	128·3	158·3
Aldehydes	17·1	11·7	5·3	19·8	44·6
Furfural	0·5	None	None	1·8	5·5
Ethers	61·3	28·1	18·3	109·7	191·5
Higher Alcohols	444·0	48·9	30·1	386·3	401·2
Coefficient of Impurities	563·5	108·9	61·4	645·9	801·1
Non-volatile Residue (per cent.)	0·08	0·0	0·0	0·14	0·18
Strength (actual)	17·0° U.P.	3·9° O.P.	8·2° O.P.	11·3° U.P.	1·7° U.P.

(NOTE.—All results except where otherwise specified are in parts per 100,000 fluid parts of absolute alcohol.)

TABLE IV.

PRICES OF DIFFERENT GRAINS.

	Price per quarter.	Weight per quarter in pounds.
Maize	about 26/–	480
Oats	14/9 to 20/–	304
Wheat	29/– to 44/–	480
Barleys—		
Smyrna malting	31/– to 35/–	448
Tripoli	31/– to 32/–	400
Danubian (feeding)	23/6	400
Morocco	24/6 to 26/–	400
Californian	39/–	448

Extracted from "London Corn Circular" of March 9th, 1908.

English Barleys—		
Malting	34/– to 35/–	448
Pedigree	40/– to 56/–	448
Brewing	31/– to 32/–	448
Feeding	25/– to 26/–	400

Extracted from "Mark Lane Express," March 9th, 1908.

APPENDIX E.

Handed in by Dr. Schidrowitz.

I.
DEFINITIONS OF WHISKEY.

Imperial Dictionary, Glasgow (1884).—"An ardent spirit, distilled generally from barley, but sometimes from wheat, rye, sugar, molasses, etc. . . . There are two chief varieties of whiskies, viz., Malt Whiskey and Grain Whiskey."

Standard Dictionary (*Funk & Wagnall's Co., New York and London*, 1889).—"An alcoholic liquor obtained by the distillation of a fermented starchy compound, usually a grain."

Nuttall's Dictionary (1901).—"A spirit distilled from grain and other substances."

Cassell's English-French Dictionary (1901).—"Whiskey, eau-de-vie de grains."

Encyclopædia Americana (1904).—"The name applied to a well-known liquor distilled from barley, wheat, oats, and other grains; potatoes, beet, and other roots."

Encyclopædia Britannica.—"It is not easy at the present day to define whiskey." It then goes on to describe the various kinds of whiskey, but the writer was evidently under the impression that all "patent still" spirit was "plain" spirit. Thus under the heading "Whiskey" (old volumes of last edition). Under "Distillation" (same volumes) occurs the following: "From fermented infusions of grain, malted and unmalted, and chiefly from barley, whiskey is distilled."

The American Cyclopædia (1863). — "A distilled spirituous liquor, made originally from malt and unmalted barley and rye, but now also manufactured from rye alone, Indian corn, or potatoes." (N.B.—Indian corn = maize.)

Blackie's Encyclopædia (1890).—"The name applied to an ardent spirit distilled generally from barley, but sometimes from wheat, rye, sugar, molasses, etc. There are two chief varieties of whiskey, viz., Malt Whiskey and Grain Whiskey . . . the latter is made from various substances, as sugar, molasses, potatoes, but principally from unmalted grain, as Indian corn, barley, oats, etc., dried and ground up. The grain most largely used is Indian corn."

Globe Encyclopædia (*Edinburgh, Thomas C. Jack*, 1879).—"A spirit distilled from grain, 'raw' or 'malted.'"

United States Pharmacopœia.—"An alcoholic liquid, obtained by the distillation of the mash of fermented grain, such as Indian corn, rye, wheat, and barley, or their mixtures."

Morewood, in "*History of Inebriating Liquors*," published by W. Warren, 140, Capel Street, Dublin, first ed. *1824*, second do. *1838*, shows (page 660, 2nd ed.) that a mixture of malt, bere or barley and *oats* or wheat, was the usual material from which whiskey was then made, oats being preferable to wheat. He also alluded to a "grain" spirit made from potatoes (page 699) in Scotland.

"*The Vintners, Brewers, Spirit Merchants and Licensed Victuallers' Guide*," published by W. Wetton (Fleet Street), in *1826*, under "malt whiskey," gives the following account of how to make same:—"In making malt whiskey one part of bruised malt, with 4-9 parts of barley meal, and a proportion of seeds of *oats* corresponding to that of the raw grain, are infused, etc."

Scientific Definitions.

Duplais (translation by M. Mackenzie, M.D.), in his "Treatise on the Manufacture of Alcoholic Liquors" (Philadelphia, Henry Carey Baird, 1871) (Patent Office Library), says on page 18:—"The term 'brandy' is used here as a generic to indicate the spirit from grape. From molasses comes rum, from grain, whiskey, etc."

Allen (*Commercial organic Analysis, vol. I., 1885*), page 106:—"Whiskey is a variety of spirit distilled from fermented grain or potatoes."

Allen (*Chemistry of Whiskey*. Journal of Institute of Brewing, Jan. 1897) says (page 30):—"In fact the patent still spirits manufactured in Ireland and the South of Scotland possess some of the characteristics of whiskey, which the true silent spirit made in Germany does not."

Schidrowitz and Kaye (Journ. Soc. Chem. Indust., June 15th, 1905). in a paper on the Chemistry of Whiskey say:—"The grain whiskies are distilled in a still designed for partial rectification, but, as will be seen from the figures below, they are far removed from being silent spirits, and, as we have already stated, they possess very considerable whiskey flavour."

II.
CONTINUOUS STILL.

(Producing from malt a "Highland" type of whiskey in a single and continuous operation.)

Analysis of Products.

1.—*Spent Wash.*

(Results in parts per 100,000 of the liquid.)

(Total Acidity - - - - - -	658)
Volatile Acidity - - - - - - -	79
Ethers - - - - - - - - -	33
Higher Alcohols - - - - - - -	13
Aldehydes - - - - - - - -	0
Furfural - - - - - - - -	4·4
Total of Volatile "Impurities" - - -	129·4

Assuming that the volume of the spent wash is 10 times that of the whiskey, then compared (volume for volume) with the latter, the volatile "impurities" eliminated in the wash are equal to roughly *1,300* (129·4 × 10).

Analysis of Foreshott and Whiskey.

(*Note.*—There is only a very small quantity of Foreshott run. No feints are obtained, for, after the still has steadied itself, it runs *whiskey* continuously until the wash is exhausted.)

	Foreshott.	Whiskey (New).
Alcohol per cent by vol.	70·01 (23 O.P.)	61·75 (8 O.P.)
	(Parts per 100,000 absolute Alcohol The figures in brackets indicate parts per 100,000 of liquid.)	
Total Acidity - -	198 (138) ...	12 (7)
Ethers - - - -	206 (182) ...	74 (46)
Higher Alcohols - -	156 (110) ...	166 (103)
Total Aldehydes - -	12 (8) ...	13 (8)
Furfural - - -	Trace ...	2·4 (1·5)
Total of "Impurities"	572 (438) ...	267·4 (165·5)

The Teed "Higher Alcohol" method was also employed, and gave a figure of 204 for the foreshotts and 160 for the whiskey. Leaving the foreshott out of account (as the amount was small and the actual quantity not known), it will be seen that bulk for bulk, roughly eight times as much of the "impurities" are eliminated in the spent wash as passed into the whiskey (1,300 : 165·5).

Comparative Analyses of Continuous Still (two different "Periods") and Ordinary Pot Still Distillation from same Material (Malt) at the same Distillery (*Whiskies*).

	Continuous Still. (March.)	Continuous Still. (Feb.)	Ordinary Pot Still. (Feb.)
Alcohol per cent. by vol.	61·75 ...	60·62 ...	63·33
		(Parts per 100,000 absolute Alcohol.)	
Acidity - - - -	12 ...	11 ...	17
Ethers - - - -	74 ...	74 ...	64
Higher Alcohols - -	166 ...	154 ...	198
Total Aldehydes - -	13 ...	11 ...	10
Furfural - - -	2·4 ...	2·1 ...	3·6
Total "Impurities" -	267·4 ...	252·1 ...	292·6

"Higher Alcohols" were also estimated by the Teed method as follows:—

160 ...	132 ...	153

The total "Impurities," according to Teed, would therefore be:—

261·6 ...	230·1 ...	247·6

The product of this continuous still is singularly in flavour like a particular Highland malt whiskey. For the sake of comparison analyses of the "continuous" whiskey and of the Highland malt in question are given below side by side, and it will be seen that there is a remarkable resemblance between them:—

	Highland Malt.		Continuous Still.
	(Parts per 100,000 absolute Alcohol.)		
Acidity	11	.....	11
Ethers	84	.....	74
Higher Alcohols	161	.....	154
Total Aldehydes	7	.....	11
Furfural	2·1	.....	2·1
Total of "Impurities"	265·1	.....	252·1

III.

ANALYSIS OF PRODUCTS OF ONE DISTILLATION AT A HIGHLAND MALT DISTILLERY.

	Spent Wash.		Spent Lees.
	(Parts per 100,000 of liquid bulk.)		
Total Acidity	(468)	.....	144
Volatile Acidity	56		
Ethers	27	.....	11
Higher Alcohols	8	.....	7
Aldehydes	0	.....	0
Furfural	20	.....	0
Total of Volatile "Impurities"	111		162

(*Note.*—By the Teed "Higher Alcohol" method no satisfactory colour could be obtained. To compare these figures with the ultimate whiskey the spent wash figures may be multiplied by 10, the spent lees by 2.)

	Mixed Low Wines and Feints as distilled.		Whiskey obtained.	
Alcohol per cent. by vol.	*21·18*	*(63 U.P.)*	*62·64*	*(10 O.P.)*
Total Acidity	68	(14)	24	(15)
Ethers	109	(23)	49	(31)
Higher Alcohols	106	(22)	132	(83)
Aldehydes	Trace		11	(7)
Furfural	4·0	(0·9)	2·0	(1·2)
(Higher Alcohols—Teed)	207	(44)	167	(105)
Total "Impurities"	287·6	(59·9)	218	(137·2)
Total "Impurities" (Teed)	388	(81·9)	253	(159·2)

Note.—Results are in parts per 100,000 absolute alcohol. The figures in brackets indicate parts per 100,000 of liquid bulk.

It will be noticed that the Highland malt whiskey particularised above gives a coefficient (Teed's method) of only 253.

Some interesting observations were made in connection with the mixed low wines and feints. The total acidity (by direct titration) was found to be 68. After distilling the acidity of the distillate was found to be equal to 115 (both in terms of 100,000 parts of alcohol). In the same way the ethers determined without a preliminary distillation were found to equal 109, and after distillation 77. These results very clearly indicate the hydrolysis that takes place by simple distillation—by ordinary fire heat, not live steam. I have often obtained similar results with new whiskies (cf. paper on "Distillation of Whiskey," J Inst. Brewing, and also Dr. Bell's results communicated to Select Committee).

In this case also a simple calculation shows that the quantity of "impurities" eliminated in the spent wash and spent lees is roughly 10 times as great as that passing into the whiskey. At the distillery in question 100 volumes of mixed low wines and feints yield roughly:—

Foreshott	7 per cent.	(30 O.P.)
Whiskey	20 „	(15 O.P.)
Feints	30 „	(55 to 60 U.P.)
Spent Lees	43 „	

IV.

ANALYSES OF RESIDUES FROM IRISH POT STILL.

(Results in parts per 100,000 parts of liquid.)

	1. Spent Wash.	2. Spent Lees. (From feint still.)	3. Spent Lees. (Spirit still.)
Total Acid	—	93	76
Volatile Acid	118	—	—
Non-Volatile Acid	—	—	—
Ethers	15	11	15
Higher Alcohols	6	6	5
Furfural	1·3	Nil	Nil
Aldehydes	Nil	Nil	Nil
Total	140·3	110	96

Note.—"Higher Alcohols" were also determined by the colorimetric (Teed) method. The results were (1) 40; (2) 36; (3) 56.

Assuming the volume of the spent wash to be roughly 10 times that of the whiskey, and the volume of spent lees 3 times that of the whiskey, the "impurities" eliminated (comparatively with those present in the whiskey) would be—

	140·3	× 10 =	1,403
plus	110	× 3 =	330
plus	96	× 3 =	288
Total			2,021

Now the "impurities" in the whiskey would be (taking a high figure) about *200* (parts per 100,000 of whiskey or = roughly to 400 computed to alcohol). The quantity of "impurities" eliminated by way of spent wash and spent lees, therefore, is about 10 times as great as the amount passing into the whiskey.

V.

PARTICULARS OF DISTILLATION AT IRISH AND SCOTCH DISTILLERIES.

1. Scotch (Lowland Malt).

Wash still charge.—3,868 gallons, producing 1,403 of low wines at 66·3 U.P.

Low wines still.—1,323 gallons, which yielded—

110	„	foreshott, at 24·1 O.P.
172	„	whiskey, at 19·4 O.P.
390	„	feints, at 41·5 O.P.

Spent wash (pot ale), 2,465 gallons; *Spent lees*, 651 gallons.

Foreshott would be run from start to about 22 O.P.

Whiskey from about 22 O.P. down to proof.

Feints from proof to water.

2. Scotch (Highland Malt).

Foreshott	7 per cent.	(at 30 O.P.)
Whiskey	20 „	(at 15 O.P.)
Feints	30 „	(at 55 to 60 U.P.)
Spent Lees	43 „	

3. Scotch (Lowland Malt).

Total low wines, 1,474 gallons, yielding—

Foreshott	81 gallons.	
Whiskey	195 „	(20 O.P.).
Feints	297 „	
Spent Lees	801 „	

4. Scotch (Highland Malt).

Wash still charge.—3,000 gallons, yielding about 1,200 to 1,300 gallons of low wines.

Spirit still charge.—2,443 gallons, yielding—

Foreshott	58 gallons.
Whiskey	229 „
Feints	1,148 „

In this case the whiskey is run at very low strength, consequently bulk of feints is large.

5. Irish (Pot Still).

(1) *Wash still charge*, 9,000 gallons. } yielding { Strong low wines, at 24 U.P. / Weak low wines, at 77·6 U.P.

(2) *No. 1. Low wines still*, charge 10,000 gallons at 71 U.P. (W.L.W.) } „ { Strong feints, 1,000 G., at 23·2 O.P. / Weak feints, 4,000 G., at 45·5 U.P. / Spent lees, 5,000 G.

(3) *Spirit still.*

Charge { Strong L. wines, 1,000 at 24 U.P. / Strong feints, 3,500 at 31 O.P. } yielding

Foreshotts	160 at 50 O.P.
Whiskey	1,474 at 48·5 O.P.
Strong feints	1,900 at 36 O.P.
Residue	966 gallons.

The residue (weak feints) for three is mixed with 3,082 gallons (weak low wines and weak feints) at 68 U.P. and re-distilled, yielding—

Strong feints	500 at 20 O.P. and
Weak feints	1,437 at 52 U.P.
Spent lees	2,111

VI.

COMPARATIVE ANALYSES OF PRODUCTS FROM POT STILLS (at same Distillery) WORKING WITH AND WITHOUT PURIFIER.

		Ordinary Pot Still.		Pot Still with Purifier	
A. Foreshott	Alcohol	72·25	...	70·16	Sample taken a few minutes after still boiled.
	Acid	19·2	...	22·9	
	Ethers	294	...	1,068·9	
	H. Alcohols	260	...	434	
	Aldehyde	50·1	...	45·4	
	Furfural	3·4	...	4·4	
B. Whiskey	Alcohol	67·74	...	68·96	Sample taken when running spirits.
	Acid	16·4	...	28·2	
	Ethers	49·4	...	161·5	
	H. Alcohols	102	...	218	
	Aldehyde	11·2	...	28·6	
	Furfural	3·6	...	3·7	

	Wash Still.		
	Few minutes after starting.		After 2 hours
Alcohol	47·30	.....	27·03
Acid	113·1	.....	133·6
Ethers	564·2	.....	214·2
H. Alcohols	420	.....	144
Aldehyde	19·8	.....	5·7
Furfural	Trace	.....	2·6

VII.

(I.) Table of the Maximum and Minimum Ratios of the Colorimetric and Oxidation Tests in Whiskies of the same Classes.

(Based on Tables of Schidrowitz and Kaye, "Journal Soc. Chem. Ind.," June, 1905.)

Source of Whiskey.	Allen-Marquardt Method.	Colour (Amylic) Method.	Ratio.
Highland Malts	142	864	Max. 1 to 6·08
„	196	390	Min. 1 to 1·99
Lowlands	179	980	Max. 1 to 5·47
„	142	264	Min. 1 to 1·86
Campbeltowns	109	504	Max. 1 to 4·62
„	182	357	Min. 1 to 1·96
Islays	162	740	Max. 1 to 4·57
„	200	621	Min. 1 to 3·10
Grains	61	400	Max. 1 to 6·55
„	62	49	Min. 1 to 0·79

(II.) "Impurities" in Five different Classes of Scotch Whiskey.

Using the Allen-Marquardt Method.

(Based on the Tables of Schidrowitz and Kaye.)

Number of Samples.	Class of Whiskey.	Average "Impurity" per 100,000 of AA.	Max.	Min.
16	Campbeltowns	335	510	201
5	Islays	294	337	260
39	Highlands	292	431	223
16	Lowlands	255	350	165
16	Grains	120.	191	63

(III.) "Impurities" in the Pot Still Samples.

(Based on Tables of Schidrowitz and Kaye.)

Co-efficient of Impurities.	Number of Samples
200 or less	5
200 — 260	21
260 — 300	14
300 — 350	22
350 and above	11

(IV.) Table of the varying Ratios of the Individual "Impurities" in different Samples in each of the Five Classes of Scotch Whiskey.

(Based on the Tables of Schidrowitz and Kaye.)

	Acids.	Ethers.	Higher Alcohols.	Aldehydes.	Furfural.
Highland Malts	1 : 8	1 : 6	1 : 2	1 : 16	1 : 4
Lowland Malts	1 : 10	1 : 3	1 : 3	1 : 7	1 : 5
Campbeltowns	1 : 8	1 : 3	1 : 1½	1 : 8	1 : 4
Islays	1 : 2	1 : 2	1 : 1¼	1 : 2	1 : 4
Grains	1 : 23	1 : 3	1 : 2½	1 : 17	1 : 20

(V.) Variations and Averages of Individual Constituents.

(Based on Tables of Schidrowitz and Kaye.)

Furfural.

	Grain.	Lowland Malt.	Highland Malt.	Campbeltowns.	Islays.
No. of Samples (new)	8	10	23	8	3
„ „ (old)	16	6	16	8	2
Maximum	0·9	5·2	6·3	8·0	5·2
Minimum	0·0	0·0	1·6	2·4	3·8
Average (new)	0/TR	2·9	3·4	3·9	4·4
„ (old)	0·24	3·3	3·7	5·5	4·8
„ (all)	0·16	3·0	3·5	4·7	4·5

Grand average of all Samples, 3·2.

Aldehydes.

No. of Samples (new)	8	10	23	8	3
„ „ (old)	15	6	16	8	2
Maximum	17	54	66	85	40
Minimum	Trace	8	4	11	17
Average (new)	5	22·0	15·4	22·9	25·6
„ (old)	6	17·5	18·6	54·6	18
„ (all)	5·7	20·5	16·7	38·7	22·6

Grand Average of all Samples, 18·6.

Total Acid.

No. of Samples (new)	3	10	23	8	3
„ „ (old)	16	6	16	8	2
Maximum	69	60	83	100	36
Minimum	3	6	10	12	15
Average (new)	4·7	15·4	17·4	17·7	17·7
„ (old)	38·5	34·6	53·4	58·9	34·5
„ (all)	27·3	22·6	32·1	38·5	24·4

Grand Average of all Samples, 30·9.

Ethers.

No. of Samples (new)	8	10	23	8	3
„ „ (old)	16	6	16	8	2
Maximum	55	87	185	140	86
Minimum	20	27	33	53	40
Average (new)	33·5	50·6	67·1	68·6	49·6
„ (old)	38·2	60·5	76·5	86·1	78·5
„ (all)	36·6	54·3	70·9	77·4	61·2

Grand Average of all Samples, 60·6.

Higher Alcohols.

No. of Samples (new)	8	10	20	8	3
„ „ (old)	15	6	17	7	2
Maximum	80	228	235	259	200
Minimum	33	82	112	109	155
Average (new)	49	161	163	175	183
„ (old)	56	143	176	215	158
„ (all)	53	154	169	194	173

Grand Average of all Samples, 143.

VIII.

ANALYSES OF WHISKIES PLACED BEFORE THE SELECT COMMITTEE OF 1890-91 BY DR. BELL. Re-calculated in the terms employed now, *i.e.*, the figures represent grams per 100 litres of Absolute Alcohol.

Table I.—New Pot Whiskies from Different Distilleries.

(Select Committee, page 94.)

No.	Total Acid.	Ethers.	Higher Alcohols.	Total.
1	7	48	191	246
2	4	39	191	234
3	5	55	193	253
4	7	27	214	248
5	8	54	191	253
6	17	60	184	261
7	15	58	183	256
8	5	56	193	254
9	4	70	137	211

Table II.—New Patent Whiskies (British).

(Select Committee, page 95.)

No.	Total Acid.	Ethers.	Higher Alcohols.	Total.	
1	4	19	63	86	Probably Irish and Scotch.
2	6	59	63	128	
3	8	25	47	80	
4	4	28	58	90	
5	2	2	18	22	English?

Table III.

Old Pot Whiskies (Scotch),

Being a series of analyses of Whiskies from the same distillery, taken at different ages. (Select Committee, page 95.)

Age in Years.	Total Acid.	Ethers.	Higher Alcohols.	Total.
1	30	123	170	326
2	21	56	214	291
3	25	72	182	279
4	33	54	186	273
5	33	96	191	320
6	33	112	208	353
7	56	35	217	308

Table IV.

Another series from the same Irish Pot Distillery at different ages. (Select Committee, page 95.)

Age in Years.	Total Acid.	Ethers.	Higher Alcohols.	Total.
1	14	35	188	237
2	17	33	201	251
3	11	36	212	259
4	12	41	216	269
5	49	48	177	274
6	29	30	205	264
7	11	37	212	260

TABLE V.

Another series from the same SCOTCH POT DISTILLERY at various ages. (Select Committee, page 96.)

Age in Years.	Total Acid.	Ethers.	Higher Alcohols.	Total.
1	23	48	177	248
2	24	43	166	233
3	27	52	180	259
4	68	70	200	338
5	32	44	201	277
6	28	75	170	273
7	35	64	184	283

These tables show the very wide variations possible in chemical composition at the same distillery, both as regards the individual constituents and the total bye-products.

TABLE VI.

OLD PATENT Whiskies (English or Scotch), being a series of analyses of Whiskies from the SAME DISTILLERY taken at different ages. (Select Committee, page 96.)

Age in Years.	Total Acid.	Ethers.	Higher Alcohols.	Total.
1	8	19	49	76
2	7	23	55	85
3	19	23	40	82
4	11	13	53	77
5	10	2	51	63
6	20	12	53	85
7	17	34	46	97

TABLE VII.

Another series of OLD PATENT (English or Scotch) Whiskies representing the SAME DISTILLERY taken at various ages. (Select Committee, page 97.)

Age in Years.	Total Acid.	Ethers.	Higher Alcohols.	Total.
1	4	22	65	91
2	12	30	44	86
4	10	17	39	66
6	38	33	65	136
7	14	23	33	70

TABLE VIII.

Analyses of FOREIGN PATENT spirits (Bell). (Select Committee, page 100.)

Number.	Total Acid.	Ethers.	Higher Alcohols.	Total
1	6	85	16	107
2	5	29	16	50
3	8	62	16	86
4	14	33	16	63
5	15	26	16	57
6	11	6	5	22
7	5	3	9	17
8	8	931	105	1,044
9	10	6	7	23
10	6	19	11	36
11	8	78	16	102
12	6	73	16	95
13	6	6	5	17
14	6	90	70	166
15	12	15	5	32
16	6	6	5	17
17	5	4	5	14

It will be seen that whereas the lowest of the Scotch patent spirits gives a total of about 63, the foreign patents run down as low as 14. Moreover, although many of the foreign patents show a *total* very similar to the Scotch, yet an analysis of the constituents of which these totals are made up shows that they are quite different types of spirits.

NOTES ON THE ABOVE TABLES.

The above tables comprise analyses from 9 (or possibly 12) pot distilleries (English, Scotch, and Irish), and from 5 (possibly 7) patent distilleries (English, Scotch, and Irish), also a series of foreign patent spirits. As at that time (1891) there were 113 pot distilleries in Scotland and 22 in Ireland, and 13 patent distilleries in Scotland, 8 in Ireland, and 10 in England, making a total of 125 pot distilleries and 31 patent distilleries, these analyses cannot be accepted as representative of the whole industry, but as far as they go they show:—

That there is very wide variation between different pot whiskies from different distilleries.

That there is very wide variation between whiskies from the same distilleries of different years.

That this also applies to the patent spirits.

That the British patent spirits differ very materially chemically from the foreign patent spirits, and that those figures also bear out chemically the contentions: (*a*) that Scotch grain is not silent, and that (*b*) it is a type of whiskey.

It will be noticed both in these analyses, as also in those of Schidrowitz and Kaye, that in the Scotch patent spirits, the higher alcohols, as a whole, are high as compared with the ethers—this also applies to the pot whiskies—whereas, in the case of the foreign spirits, they are either almost "silent," or, where they contain appreciable quantities of bye-products, the ethers are relatively very high as compared with the higher alcohols, that is to say, exactly the reverse. The foreign spirits which are practically silent (Nos. 6, 7, 9, 13, 16, 17) are probably the highly rectified "Hamburg" potato spirits, those containing appreciable amounts of ethers may be the molasses and beet spirits, those with very high amounts of ethers (Nos. 8 and 14) possibly from sugar-cane molasses.

IX.

FURTHER ANALYSES OF PATENT STILL WHISKIES (SCHIDROWITZ).

I.—Scotch Samples sold and consumed Unblended. Sold under name of Distillery.

	Alcohol per cent. by vol.	Extract per cent	Total Acid.	Non-Volatile Acid.	Ethers.	H. Alcohols (A.-M.).	Aldehydes	Furfural.
Sample A.—Labelled "Three year old grain whiskey. Cameron Bridge Distillery, Fife."—The name and address of the retailer (in Glasgow) also appears on the label. Sold in bottle. Purchased September, 1905 - -	45·48	0·11	16	4	52	58	13	0·18
Sample B.—Labelled "Distilled in 1884. A perfectly pure spirit for medicinal purposes. 'Cambus' grain whiskey."—The name of the retailer (in Glasgow) also appears on the label. Purchased September, 1905 - - - - -	44·79	0·10	32	6	44	62	26	0·31
Sample C.—Taken from Prof. Dewar's Private Cask at the Royal Institution, November, 1905. (This is *Cambus* whiskey) - - - - - -	57·06	0·12	50	40	45	47	9	Trace

Note.—I have personally seen at the retailers in Glasgow (as early as 1904) samples labelled as A and B.

II.—Scotch Patent Still Whiskies made from Malt only (Schidrowitz).

	Alcohol per cent. by vol.	Extract per cent	Total Acid.	Non-Volatile Acid.	Ethers.	H. Alcohols (A.-M.).	Aldehydes	Furfural.
Distillery No. 49 (J. Soc. Chem. Ind., June, 1905).—New Whiskey - -	94·77	—	3	—	42	70	3	Nil
Distillery No. 30.—New Whiskey - -	62·1	—	8	—	44	88	9	Nil

III.—Set of Samples from Scotch Patent Still Distillery (Schidrowitz).

(The produce of this distillery had not previously been examined.)

	Alcohol per cent. by vol.	Extract per cent.	Total Acid.	Non Volatile Acid.	Ethers.	H. Alcohols (A.-M.)	Aldehydes	Furfural.
(*a*) New Whiskey - - - - -	60·34	—	4	—	25	65	2	—
(*b*) 4 months Sherry Wood - - -	60·76	0·059	24	10	26	31	4	0·07
(*c*) 2 years Plain Wood - - - -	59·32	0·026	14	3	25	100	5	Trace
(*d*) 2 years Sherry Wood - - -	59·68	0·244	58	34	40	44	7	0·15

IV.—Irish Patent Still Whiskies (Schidrowitz).

	Alcohol per cent. by vol.	Extract per cent	Total Acid.	Non-Volatile Acid.	Ethers.	H. Alcohols (A.-M.).	Aldehyde	Furfural.
Distillery A—New - - - - -	70·76	—	17	—	25	38	—	—
" " - - - - -	69·87	—	21	—	41	50	—	Trace
" 2 years - - - - -	70·72	0·01	10	4	24	48	3	Trace
Distillery B.—New - - - - -	71·94	—	3	—	19	52	—	—
" 1½ years - - - -	69·34	0·007	9	1	25	46	1	Trace
Distillery C.—New - - - - -	71·6	—	—	33	33	50	11	Nil

Note.—Except where otherwise stated, results are in grams per 100 litres of absolute alcohol.

X.

ANALYSES OF IRISH POT STILL WHISKIES (SCHIDROWITZ).

	Alcohol per cent. by vol.	Extract per cent.	Total Acid.	Non-Volatile Acid.	Ethers.	Higher Alcohols (A.-M.)	Aldehydes	Furfural.
Distillery A.—New	71·72	—	7	—	34	145	12	5·5
„ 13 years plain wood	57·08	0·04	29	8	38	185	68	3·3
Distillery B.—New	74·11	—	6	—	28	233	8	4·1
„ 13 years plain	60·47	0·05	32	8	47	264	21	4·4
Distillery C.—14 years sherry	63·42	0·29	87	44	87	226	32	4·5
Distillery D.—Mature	46·64	0·13	67	26	59	147	16	2·6

AMERICAN WHISKIES (SCHIDROWITZ).

Bourbon Whiskey A.—5 years	49·40	0·14	126	40	99	197	11	2·2
„ „ *B.*—Mature	47·78	0·56	122	30	78	129	14	3·0
Rye Whiskey A.—7 years	56·31	0·18	140	49	134	277	20	3·9
„ *B.*—Mature	49·32	0·16	160	49	141	268	18	3·4
„ *C*—Mature	46·08	0·16	135	31	125	187	21	3·9
„ *D.*—Mature	46·56	0·22	82	21	71	150	13	3·6
„ *E.*—10 years	44·37	0·60	70	18	79	98	11	2·7
Doubtful	45·99	0·21	63	16	69	110	14	2·2

Note re *American Whiskies.*—All the above samples were retail, bottle goods, excepting Rye A. which was received from Dr. Wiley. Both the Bourbon samples and Rye samples A, B, and C, are pot still whiskies, the others probably blends.

The average composition of New and Old Bourbon, and New and Old Rye whiskies (American), based on a large number of analyses of samples examined in the laboratory of the *Department of Agriculture*, U.S.A., are given below. These analyses were kindly transmitted to me by Dr. Wiley, chief chemist of the Department.

		Extract.	Ash.	Total Acid.	Non-Volatile Acid.	Ethers.	Aldehydes.	Furfural.	Higher Alcohols (A.-M.)
New Rye Whiskies (19 samples)	Average	12	5·2	11·4	2·2	50·6	17·8	2·4	266·4
	Maximum	27	13·6	28·2	2·4	132·8	86·0	5·2	378·4
	Minimum	2	0·0	2·6	0·0	8·8	0·0	0·0	178·0
Old Rye Whiskies (76 samples)	Average	363·2	17·8	147·6	21·4	137·0	27·6	4·6	352·0
	Maximum	456·0	38·2	312·4	33·4	287·4	47·2	14·0	585·8
	Minimum	226·5	2·0	72·8	13·4	60·0	4·4	0·8	146·6
New Bourbon Whiskies (18 samples)	Average	16·0	5·2	16·4	0·0	45·0	7·8	Except in 5 cases	229·4
	Maximum	110·0	35·4	39·2	0·0	112·8	36·2	Traces only—6·8; 6·4; 1·0; 12·8; 4·0.	343·4
	Minimum	2·8	0·0	3·6	0·0	1·8	0·0		70·6
Old Bourbon Whiskies (75 samples)	Average	308·6	21·8	137·6	16·8	103·6	19·4	3·8	287·2
	Maximum	456·6	161·6	203·8	24·0	209·0	46·4	16·2	517·0
	Minimum	94·6	6·0	69·4	4·6	39·0	7·2	1·4	50·4

Note.—In all the above tables, except where otherwise stated, the figures represent grams per 100 litres of absolute alcohol, *i.e.*, parts per 100,000 parts of alcohol.

XI.

EXAMINATION OF 10 AUTHENTICATED SAMPLES (from 9 different Distilleries) OF SCOTCH POT STILL WHISKIES BY DR. TEED'S METHOD.

Nature of Sample.	Grams per 100 Litres Absolute Alcohol.						
	Alcohol per cent. by vol.	Volatile Acid.	Ethers.	"Higher Alcohols" (Teed).	Aldehydes.	Furfural.	Total "Coefficient."
1. Highland Malt (New)	63·5	16	78	200	11	2·4	307·4
2. Highland Malt (Mature)	60·8	37	73	208	9	2·4	329·4
3. Highland Malt (New)	63·5	11	89	201	7	2·1	310·1
4. Lowland Malt (New)	63·3	16	64	153	10	3·6	246·6
5. Lowland Malt (Mature)	59·1	40	102	187	28	4·5	361·5
6. Highland Malt (New)	63·7	15	52	325	6	1·6	399·6
7. Lowland Malt (New)	63·1	15	52	363	14	2·6	426·6
8. Campbeltown (Mature)*	59·8	32	63	405	40	8·0	548·0
8A. Campbeltown (Mature)*	60·9	72	70	383	30	8·0	563·0
9. Campbeltown (New)	62·1	23	61	325	36	6·1	451·1

The above constitute *all* the authenticated Scotch pot still whiskies which I have examined by this method. The figures for the "coefficient" vary from 246·6 to 563·0, and 5 samples are below, 5 above, the proposed 380 standard.

* *Note.*—Samples 8 and 8A were from the same distillery, and of the same age (6 years). Sample 8 was stored in "plain," sample 8A in "sherry" wood.

XII.

NITROGEN IN WHISKIES.

Type of Whiskey. Scotch Whiskies (New).	Nitrogen (as Ammonia) in Grams per 100 Litres Absolute Alcohol.
Highland Malts - - - -	0·14
	0·09
	0·19
	0·14
	0·19
	0·14
Lowland Malts - - - -	0·11
	0·14
	0·30
Campbeltowns (Malt) - -	0·14
	0·08
Grains - - - - - -	0·11
	0·06
	0·08
	0·14
	0·03
	0·03

Each figure above refers to a separate distillery, and the results comprise all the new Scotch whiskies I have examined in this way.

American Rye Whiskies (Matured) -	0·26
	0·30
	0·39

I have tested a number of grain whiskies with the usual alkaloid reagents, but so far have failed ever to obtain evidence of the presence even of the slightest traces of such substances.

The method of estimating the nitrogen was as follows:—To 200 cc. of the whiskey, 0·2 grams of tartaric acid were added, and the whole evaporated to a small bulk. The residue was transferred to a flask, made alkaline with caustic alkali and then steam distilled. The distillate was again rendered acid with tartaric acid, evaporated to a small bulk, transferred to a Kjeldahl apparatus, and treated in the usual manner with strong H_2SO_4 and K_2SO_4. The ultimate distillate was Nesslerised.

Notes on the Nitrogen Estimation.—In some cases the distillate obtained after steam distilling (first stage) had a distinctly basic odour (resembling tobacco smoke). This was particularly noticeable in the case of the heavy malts. On acidifying the liquid this odour disappeared, and generally became pleasantly ethereal.

In this connection it is interesting to note that frequently, particularly in the case of the *new* Campbeltowns, Islays, and heavy Highland and Lowland whiskies, the *distillates* obtained on distilling the whiskies after treatment with alkali are of a strong yellow or yellowish green colour.

APPENDIX F.

EXTRACTS FROM PAPERS HANDED IN BY DR. SCHIDROWITZ.

I.

"THE CHEMISTRY OF WHISKEY."

PART II.

By PHILIP SCHIDROWITZ, Ph.D., F.C.S., and FREDERICK KAYE, A.R.C.Sc.

[*Reprinted from the Journal of the Society of Chemical Industry, 15th June, 1905. No. 11, Vol. XXIV.*]

The secondary products in a spirit of any kind—referring to new spirit—are obviously dependent upon the nature of the raw materials or on the method of manufacture. As regards pot-still whiskey the chief points of interest appeared to us to be the effect of the use of peat in kilning the malt, and the result of the fire-action, in the still, that is, the effects produced by the impinging of a naked flame on the liquid, and particularly the solid contents of the still. We were inclined to believe that a considerable part of the flavour of pot whiskey is due to this fire-action, and, starting from this hypothesis, we obtained results of interest, but, for reasons stated below, we have had to materially modify our views in this connection. We thought that fire-action would necessarily produce dry distillation in some more or less modified form of the solid particles in the still, which, notwithstanding the use of stirring apparatus, must, in part, be in close proximity to the still bottom. These solid particles consist mainly of woody or cellulosic material derived from the grain, and of yeast. It occurred to us, that by exaggerating this fire-action by suitable methods in the laboratory, we might obtain, in relatively large quantities, those substances which are formed in minute amount in the still. The simplest yet at the same time the most radical way of testing this view was to dry distil material identical with or similar to that present in the solid shape in the working still. The products resulting from the dry distillation of woody matter are well known, and we therefore confined our experiments in this regard to the dry distillation of distillery yeast, respecting which we could find no information in literature. A large number of experiments in this direction were made both in the laboratory and on a working scale. Briefly stated, the products obtained are somewhat similar to those formed on distilling bones. They consist mainly of tar bases (fatty amines, and of the pyridine and pyrrol series), tar acids (phenols), a large proportion of nitriles, of neutral hydrocarbons, of organic sulphur compounds (mercaptans), of ammonia salts (chiefly carbamate and chloride), sulphides, thiocyanates, and a large volume of gases consisting chiefly of carbon dioxide, sulphur dioxide, and sulphuretted hydrogen. Having obtained these results we proceeded to examine new pot whiskey, with a view to ascertaining whether any and which of these substances were present in the same. In this we were partially successful, for we obtained distinct evidence of the presence of pyrrol, of phenolic bodies, of an alkaline substance (probably an ammonia salt), of sulphuretted hydrogen, and of sulphurous acid in different whiskies. We are also inclined to think that new whiskies contain traces of nitriles, but the definite identification of these substances in spirits is attended with so much difficulty that we prefer not to mention this otherwise than as a mere suggestion. The work of identifying more closely the substances mentioned, and of estimating some of them, if possible, quantitatively, is being carried on, but progress must necessarily be slow in view of the minute quantities in which they occur.

It will be noticed that all the substances mentioned as having been detected are such as would tend to become changed in time on exposure to air and moisture. Pyrrol under the conditions of cask storage probably resinifies, and this action would no doubt also apply to any other substances of a similar nature that may be present. The phenols may, and probably would, interact with the aldehydes, acids or alcohol to form condensation products, the sulphurous acid and sulphuretted hydrogen would naturally oxidise, and nitriles, if present, would certainly and rapidly condense or be transformed into acids. We have not been able to detect any of the substances alluded to in mature spirit. These facts appear to us to form the basis of a more rational view of maturation than has hitherto prevailed, and although we do not suggest that the maturing process consists merely of the disappearance or transformation of the substances alluded to—in view particularly of the fact that we are aware that material changes take place with regard to the better known constituents, such as furfural, the acids, aldehydes, etc.—yet the disappearance of these substances would certainly appear to account in part for the elimination of the raw and unpleasant character of new, and more particularly of new pot, spirit. Bodies such as these might well be, in conjunction with the aldehydes and furfural, accountable for the curious effects which are attributed to immature spirits.

The basis of the experiments which had the results mentioned above was the assumption that fire-action was one of the chief, if not the main, cause of the production of the characteristic products in pot spirit. In view of the results obtained, this hypothesis might, at the first glance, appear to have received substantial confirmation. We have, however, already stated that our opinion in this respect has undergone considerable modification, and the reason for this is that we have come across pot whiskies—the samples were taken

personally by one of us at the distilleries—distilled by means of slightly superheated steam, the latter being applied by means of a steam jacket, which, as far as we have been able to determine, do not differ materially as regards the specific nature of the secondary products contained, from whiskies distilled by the more general direct fire process. This fact undoubtedly disposes of the assumption that furfural, to mention one of the better known substances, the formation of which is usually attributed to fire-action, is due to the latter, and in this regard the presence, as found by us, of furfural in appreciable quantities in grain whiskies, proves that this substance is not only not attributable to fire-action, but that it is not a specific indication of pot distillation. Since we have discerned no material difference between the specific products of fire and steam distilled pot spirits respectively, it is obvious that the formation of the substances alluded to above—and found by us on the assumption that they are due to dry distillation—is not due to fire-action in the still. We presume, therefore, that, as far as they are obviously specific dry distillation products, they are derived from the peat and coke used in malting, or from the action of the hot gases on the kiln during the drying-off stage.

The results of the analyses are given in detail for the following reasons: (1) That it is only by this method that the interesting and important differences, frequently of a very wide nature, between spirits of the same class and of different classes can be properly illustrated, and that it is only thus that the results can obtain technical importance; (2) that the number of full whiskey analyses published so far is very small; and (3) that this is the first publication, to the best of our knowledge, of a large number of analyses of properly authenticated samples of any spirit whatever, be it of brandy, of whiskey, or of any other potable spirit.

Method of taking samples.—In order to make certain of our material, all the samples were drawn at the distilleries straight from bond, and duly signed or sealed by the authorities in charge. A great number of the samples were drawn by one of us, the remainder were obtained for us (also from bond and authenticated in each case as above) by an agent of our own. In every case, the samples were drawn and submitted to us with the full knowledge and approval of the distillers. We take this opportunity of thanking the proprietors of the various Highland malt, Lowland malt, Campbeltown, Islay and grain whiskey distilleries, not only for their kindness in providing us with samples, but also for the facilities they afforded us in viewing without restrictions the materials employed, the apparatus in use, and the methods of manufacture generally.

The methods of analysis employed were in the main those set out by one of us in the first paper on this subject in this J. (*loc. cit.*). With regard to the higher alcohols, it was stated in the paper alluded to that the colorimetric method, as devised by French investigators for the analysis of brandy, did not give satisfactory results, inasmuch as the shade of colour obtained when operating on whiskey differed sensibly from that given by the control—namely, isobutyl alcohol. It was suggested at the same time that the difficulty might possibly be got over by using a more suitable control, and we have now found that this is the case if, instead of isobutylic alcohol, amylic alcohol (isobutylcarbinol) be employed. This substance gives satisfactory results as far as *shade* of coloration is concerned, but we are very strongly of opinion that no colorimetric process can give really accurate results, were it only for the reason that—as Bell has shown—the higher alcohols in whiskey consist of a mixture of different alcohols, these, no doubt, varying in every individual case, and that it is well known that the coloration produced by the various higher alcohols with sulphuric acid varies enormously in intensity (*cf.* Allen J. Fed. Inst. Brew., III., 1, 24). Thus, neither of the propyl alcohols gives any coloration with sulphuric acid, and this, no doubt, accounts for the low results obtained in the case of the grain whiskies. Moreover, there is some reason for believing that other substances besides the higher alcohols come into play in this reaction. This is (*cf.* Allen, *loc. cit.*) certainly the case with regard to the higher esters, and substances such as pyrrol and the terpenes; the great class of bodies grouped under the name of "essential oils," would also undoubtedly be affected. Nevertheless, we have given the results obtained by the colorimetric process as modified by us, for we think that it may, when compared with the Allen-Marquardt results, afford some rough indication of the quantity of the higher esters, terpenes and other substances, to which we cannot yet give specific numerical expression, present. In order to make the results obtained by the colorimetric process comparable as far as possible with those recorded in literature as obtained (chiefly in the case of brandy) with an isobutyl alcohol standard, we made some experiments to ascertain the relative intensity of colour obtained with this alcohol and with amyl alcohol respectively. The shades produced are not absolutely comparable, but if the figures given by us be divided by 2·5, the results will roughly approximate to those that would be obtained if an isobutyl control solution were used.

The analyses tabulated below comprise spirits from 57 different distilleries. Each distillery is indicated by a number, and where more than one sample from the same distillery was examined, an alphabetical letter is added. For obvious reasons we have refrained from referring to the distilleries by name. A few words with regard to the classification, and the method of manufacture of the different classes, may be of interest. The classification is that adopted by the industry concerned, and may be broadly characterised as indicating varieties of the same genus: *The Highland Malts* are produced (if we except a few distilleries on the islands in the west and north) in the district on the mainland lying north of an imaginary line drawn through Dundee on the east and Greenock on the west. The malt is cured either with peat alone, or with a mixture of peat and coke. *The Lowland Malts* are made south of the imaginary line alluded to. Less peat is used in the preparation of the malt, and occasionally, we believe, peat is dispensed with altogether, especially of late years, owing to the growing taste for a spirit with a less pronounced peaty flavour. *The Campbeltowns* are distilled at the southern end of the Kintyre peninsula.

The *Islays* are made in the island of that name. More peat is used in the preparation of these whiskies than in any of the other classes. We have laid some stress on the amount of peat used, as it is one of the few specific points in manufacture of which we have fairly definite knowledge. It must, however, not be assumed that the use of peat alone is responsible for all the characteristics of Scotch whiskey, for the Lowland malts in the preparation of which little and sometimes no peat is employed, and the Grain whiskies which are made without peat, yet unmistakably possess those broad characteristics of flavour which are associated with the article in question. The differences between the various classes and individuals of the same class are largely dependent, no doubt, on the nature of the barley and other raw materials of a starchy nature employed, on the water, the methods of malting and distilling, the shape and manner of working the stills, etc. We hope, on some future occasion, to give an account of an investigation in this direction. The *Grain* whiskies, in the manufacture of which other cereal grains—partly malted and partly unmalted—besides barley are employed, are made in the district bounded by the Firth of Forth on the east, and the Firth of Clyde on the west. The Grain whiskies are distilled in a still designed for partial rectification, but as will be seen from the figures below, they are far removed from being silent spirits, and, as we have already stated, they possess very considerable whiskey flavour.

Regarding the tables that follow we must mention that the first column shows the age of the spirit in years and months, and the letter following the age indicates the nature of the cask employed for storage. In this respect *P.* stands for *plain wood*; *R.* for *refill wood*, that is a cask which was originally used for the storage of sherry, was then employed once for storing whiskey, was emptied and again filled with spirit; *S.* for *sherry wood*; and *B.* for *brandy wood*. The word *wood* is synonymous with cask.

The brackets in cases of several spirits from the same distillery indicate that the spirit was originally the same, but placed in a different type of cask or submitted to varied conditions of storage, etc., after distillation. Where the age is given as identical, but the samples are not bracketed, the fact is indicated that the different spirits were not taken from one and the same period, which is the term applied to each separate distillation, but that they were distilled within a very short time (a week or two) of one another. The latter results are, of course, not strictly comparable.

Highland Malts.

Distillery Number.	Age and Wood.	Alcohol Per Cent. by Vol.	Extract Per Cent.	Ash Per Cent.	Total Acid.	Non-vol. Acid.	Volatile Acid.	Ethers.	Higher Alcohols Color. Method.	Higher Alcohols A-M Method.	Aldehydes.	Furfural.
1	new	63·4	0·008	0·004	12	0	12	59	667	201	24	3·2
1*a*	3/7 P	62·0	0·04	0·004	28	2	26	66	582	221	11	3·7
1*b*	3/7 S	61·0	0·38	0·008	49	14	35	49	647	218	10	3·4
1*c*	3/7 B	62·2	0·08	0·004	51	17	34	67	691	—	14	3·4
1*d*	4/9 S	58·6	0·05	0·006	54	17	37	79	485	180	8	3·9
2	new	69·0	0·006	0·001	15	0	15	52	543	166	10	3·9
(damp store) 2*a*	7 P	47·4	0·03	0·005	47	7	40	103	518	171	20	3·4
(dry store) 2*b*	7 P	60·5	0·06	0·008	49	9	40	90	487	161	12	4·7
2*c*	7 S	61·0	0·15	0·02	70	27	43	91	485	179	10	4·2
2*d*	15 B	49·4	0·06	0·007	61	9	52	80	431	160	16	4·9
3	new	62·8	0·01	0·001	14	0	14	64	703	195	10	3·6
3*a*	6/9 P	60·2	0·03	0·002	26	3	23	66	546	138	15	3·6
3*b*	6/9 S	59·5	0·17	0·012	66	35	31	63	480	134	18	2·7
4	new	63·5	0·007	0·001	16	1	15	78	358	126	11	2·4
5	new	60·3	0·01	0·007	12	1	111	59	361	—	4	1·6
6	new	63·6	0·009	0·002	15	1	14	55	491	156	7	1·7
7	new	63·4	0·006	0·002	15	1	14	72	525	181	7	1·9
8	new	62·0	0·009	0·005	19	0	19	33	578	175	18	5·8
9	0/6 P	63·0	0·02	0·003	23	1	22	68	391	142	15	3·1
10	new	63·0	0·02	0·002	22	1	21	48	515	197	30	3·3
11	new	63·4	0·005	0·000	20	—	—	57	543	154	11	3·1
12	0/4	62·6	0·01	0·003	15	1	14	185	328	177	29	4·4
12*a*	3/7 S	60·5	0·37	0·016	77	24	53	92	377	163	28	3·7
13	new	63·8	0·01	0·006	15	0	15	57	479	224	16	3·5
13*a*	7/7 P	57·1	0·16	0·008	32	7	25	50	390	196	16	3·7
13*b*	7/7 S	59·0	0·22	0·018	63	13	50	56	351	145	17	3·7
14	new	63·0	0·006	0·002	18	0	18	43	357	169	6	3·8
15	new	61·2	0·007	0·002	16	0	16	64	812	161	11	4·2
16	new	63·2	0·008	0·002	10	0	10	84	485	112	14	3·2
16*a*	Old. S.	56·0	0·16	0·012	62	21	41	—	481	218	18	2·7
17	5/4 P	61·3	0·04	0·003	83	12	71	101	533	154	19	3·1
18	new	63·7	0·007	0·003	19	0	19	67	480	144	11	5·2
19	new	68·4	0·008	0·002	18	0	18	67	560	133	17	2·7
20	new	62·6	0·01	0·002	22	2	20	63	584	175	37	3·7
21	new	63·1	0·008	0·002	27	2	25	82	864	142	44	6·3
21*a*	5 P	57·7	0·02	0·004	36	2	34	89	845	235	66	4·7
22	new	64·9	0·008	0·002	20	1	19	67	437	129	11	3·0
23	new	63·6	0·006	0·002	22	2	20	69	583	180	5	2·6
24	new	63·7	0·004	0·000	15	1	14	52	422	148	6	1·6

Note.—Results, excepting in case of alcohol, extract and ash, are expressed in grms. per 100 litres of Abs. Alcohol.

LOWLAND MALTS.

Distillery Number.	Age and Wood.	Alcohol Per Cent. by Vol.	Extract Per Cent.	Ash Per Cent.	Total Acid.	Non-vol. Acid.	Volatile Acid.	Ethers.	Higher Alcohols Color. Method.	Higher Alcohols A-M Method.	Aldehydes.	Furfural.
25	new	64·1	0·008	0·002	15	3	12	49	296	82	15	4·5
26	new	63·4	0·008	0·002	10	0	10	27	458	123	17	2·5
26*a*	5/9 P	60·7	0·03	0·006	20	3	17	44	501	154	15	3·1
26*b*	5/9 S	62·0	0·06	0·007	32	10	22	52	712	156	15	3·1
27	1/7 R	62·6	0·02	0·004	10	0	10	48	189	101	8	1·6
28	4/8 R	60·0	0·09	0·02	60	16	44	80	539	126	17	3·2
29	new	66·8	0·002	0·000	22	1	21	44	612	172	11	2·1
29*a*	5/8 P	57·5	0·02	0·004	36	2	34	71	980	179	27	5·2
29*b*	5/8 S	58·8	0·09	0·007	50	7	43	68	732	145	24	3·4
30	new	62·1	0·009	0·003	8	0	8	44	405	88	9	0·0
31	new	63·1	0·017	0·008	15	1	14	32	425	169	14	2·6
32	new	63·6	0·009	0·002	19	1	18	70	605	228	30	2·6
33	new	63·0	0·01	0·004	27	0	27	51	516	215	41	3·5
34	new	63·5	0·008	0·002	6	0	6	58	897	242	54	1·7
35	new	63·2	0·01	0·003	21	0	21	87	264	142	18	4·4
36	new	68·4	—	—	11	4	7	44	557	179	14	4·7

NOTE.—Results, excepting in case of alcohol, extract and ash, are expressed in grms. per 100 litres of Abs. Alcohol.

CAMPBELTOWNS.

Distillery Number.	Age and Wood.	Alcohol Per Cent. by Vol.	Extract Per Cent.	Ash Per Cent.	Total Acid.	Non-vol. Acid.	Volatile Acid.	Ethers.	Higher Alcohols Color. Method.	Higher Alcohols A-M Method.	Aldehydes.	Furfural.
37	new	62·1	0·01	0·003	24	1	23	61	443	222	36	6·1
37*a*	5 P	50·1	0·025	0·004	49	3	46	90	723	235	73	6·7
37*b*	5 S	54·5	0·25	0·024	81	23	58	69	737	212	58	6·4
38	new	63·9	0·006	0·002	15	1	14	72	583	212	28	2·7
38*a*	5 P	62·1	0·015	0·004	20	1	19	62	645	166	85	2·8
38*b*	5 B	60·1	0·07	0·008	36	6	30	64	615	203	31	2·5
39	new	62·8	0·01	—	22	0	22	88	357	182	29	5·0
40	new	63·0	0·018	0·004	19	0	19	97	554	172	16	2·9
Cask A.—40*a*	5/7 S	58·7	0·18	0·01	75	16	59	140	930?	—	61	4·7
Cask B.—40*b*	5/7 S	58·8	0·18	0·01	75	22	53	132	846?	239	59	4·7
41	new	63·4	0·013	—	17	1	16	77	367	178	11	4·5
42	new	61·3	0·008	0·004	16	0	16	53	504	109	20	2·9
43	new	63·3	0·014	0·004	17	1	16	59	722	190	28	4·4
43*a*	6/5 P	59·8	0·04	0·004	35	3	32	63	877	259	40	8·0
43*b*	6/5 S	60·9	0·19	0·02	100	28	72	70	698	193	30	8·0
44	new	64·0	0·006	—	12	0	12	42	635	138	15	2·4

ISLAYS.

Distillery Number.	Age and Wood.	Alcohol Per Cent. by Vol.	Extract Per Cent.	Ash Per Cent.	Total Acid.	Non-vol. Acid.	Volatile Acid.	Ethers.	Higher Alcohols Color. Method.	Higher Alcohols A·M Method.	Aldehydes.	Furfural.
45	new	63·6	0·006	0·003	19	0	19	40	620	176	20	4·8
46	new	63·5	0·006	0·001	19	0	19	53	738	174	40	3·8
47	new	66·3	0·007	0·001	15	2	13	56	621	200	17	4·5
47a	5 P	60·5	0·04	0·006	36	6	30	71	740	162	18	4·5
47b	7 S	60·7	0·16	0·02	73	33	40	86	642	155	18	5·2

NOTE.—Results, excepting in case of alcohol, extract and ash, are expressed in grms. per 100 litres of Abs. Alcohol.

GRAIN WHISKIES.

Distillery Number.	Age and Wood.	Alcohol Per Cent. by Vol.	Extract Per Cent.	Ash Per Cent.	Total Acid.	Non-vol. Acid.	Volatile Acid.	Ethers.	Higher Alcohols Color. Method.	Higher Alcohols A·M Method.	Aldehydes.	Furfural.
48	new	62·8	0·007	0·001	4	0	4	25	58	49	2	0·0
48a	5 P	60·1	0·04	0·005	46	3	43	45	89	50	3	0·3
49	new	63·7	0·006	—	3	0	0	23	51	37	trace	0·0
49a	5/9 P	63·6	0·02	0·002	16	2	14	25	49	62	6	trace
50	new	61·6	0·01	0·004	4	0	4	55	52	62	17	trace
50a	6/4 R	58·7	0·05	0·007	22	4	18	44	73	46	4	trace
51	new	63·1	0·002	0·000	4	0	4	54	93	35	2	0·0
51a	5 S	60·9	0·12	0·011	69	18	51	45	70	54	6	0·7
51b	5 R	60·7	0·12	0·006	38	10	28	49	145	—	—	trace
52	new	63·8	0·005	0·001	4	0	4	25	58	60	2	0·0
52a	6/7 P	58·9	0·02	0·001	17	1	16	39	168	63	2	0·0
53	6 R	56·7	0·08	0·01	37	15	22	27	89	65	4	trace
53a	6 S	57·5	0·14	0·02	55	26	29	37	92	68	6	trace
54	new	62·8	0·008	0·000	10	0	10	40	199	70	2	0·0
54a	4/2 R	62·6	0·04	0·007	27	2	25	33	178	57	2	trace
54b	4/2 S	62·7	0·10	0·01	48	26	22	41	161	58	7	0·4
55	6 R	60·7	0·04	0·006	21	3	18	41	34	35	4	0·9
55a	6 S	60·9	0·12	0·01	59	24	35	54	74	40	3	trace
56	new	63·9	0·004	0·0	3	0	3	20	281	51	15	0·0
56a	6 R	60·3	0·14	0·002	35	5	30	33	297	57	10	0·4
56b	6 S	60·8	0·17	0·01	42	15	27	33	400	61	14	0·5
56c	6/9 S	60·8	0·12	0·01	57	15	42	39	278	80	14	0·7
57	new	62·6	0·01	—	6	0	6	26	104	33	trace	trace
57a	6/7 P	61·5	0·03	0·003	27	5	22	26	190	47	5	trace

NOTE.—Results, excepting in case of alcohol, extract and ash, are expressed in grms. per 100 litres of Abs. Alcohol.

Conclusions.—Looking at the above results, the first fact which strikes one is the very wide variation in regard to the different constituents, not only between the different classes, but also as between members of the same class. The following table gives the maxima and minima in each class, taking all the spirits together regardless of age.

	Total Acid.	Non-vol. Acid.	Ether	Higher Alcohols Colorimetric Method.	Higher Alcohols Allen-Marquardt Method.	Aldehydes.	Furfural.
Highland malts	10—83	0—35	33—185	328—864	112—235	4—66	1·6—6·3
Lowland malts -	6—60	0—16	27—87	189—897	82—228	8—54	0—5·2
Campbeltowns -	12—100	0—28	53—140	357—930	160—259	11—85	2·4—8·0
Islays - -	15—36	0—33	40—86	620—740	155—200	17—40	3·8—5·2
Grains - -	3—69	0—26	20—55	39—400	33—80	trace—17	0—0·9

With regard to the effect of maturation we have not drawn up averages for all the classes, as up to the present we have not been in a position, excepting in the case of the grain whiskies, of examining a sufficiently large number of corresponding old samples to make averages in this regard at all representative. In regard to the grain whiskies, the averages for old and new samples respectively are as follows:—

	Total Acid.	Non-vol. Acid.	Ether.	Higher Alcohols Colorimetric Method.	Higher Alcohols Allen-Marquardt Method.	Aldehydes.	Furfural.
Average—New -	4·7	0·0	33·5	113·2	49·3	5	trace
Average—Old -	38·5	10·6	38·2	151·1	56·2	6	0·24

It will be noticed that the old samples show marked increase over the new, in the case of the non-volatile and volatile acids, and the substances indicated by the colorimetric process, and slight, though appreciable differences in regard to the ethers, the higher alcohols, and the furfural. The aldehydes alone—contrary to our expectations—show no marked change. So far as we have been able to examine mature specimens of the other classes these conditions of change appear to be universal, but we prefer, at present, to express no definite opinion in this respect. On referring to the tables it will be seen that the type of cask appears to exercise considerable influence on the course of maturation. We hope to say more about this on another occasion, but meanwhile we may remark that the differences noted in this respect appear to affect principally the acid, the products indicated by the colorimetric process and the aldehydes, and that the sherry cask appears to hasten maturation as compared with other wood. Of very great interest are the results concerning No. 2, where the effects of storage in a damp and in a dry warehouse respectively are plainly evident. It is obvious, too, from No. 40, that the condition of the cask—quite apart from the nature of the wood—is of influence.

It is scarcely, perhaps, within the province of analytical chemistry, to take into consideration such factors as taste and flavour, or of commercial quality except where numerical or scientific expression can be given to such factors, but the technologist cannot pretend to ignore them. Viewed in this light we may say that, taking as the sole practicable standard of commercial quality the *commercial price*, our results show, as might have been expected, that no *single* analytical figure denotes commercial quality. Our remarks in this respect are to be taken as referring to individual members of the same class, for it is out of the question to compare the various classes with one another, as such a proceeding would be about as reasonable as to compare Burgundy with Claret, or the wines of the Rhine with those of the Moselle, or a stock bitter ale with a mild running beer. To take the Highland malts as an example we may point out that Nos. 11, 15, and 19, which are amongst the whiskies fetching the very highest prices, contain only a moderate amount of ethers as compared with Nos. 12, 17, and 21, the latter spirits being by no means regarded as of the first quality. The same applies to any of the other figures taken singly, but at the same time, those spirits which have the greatest reputation commercially, all show a certain "balance" of the figures, taking them as a whole, and class for class, which, in our opinion, augurs well for the role which the chemical technologist in the future will be able to play as an aid to the distiller and blender. Whiskies such as Nos. 5, 8, 12, 15, 17, 18, 21, and 24 (to confine ourselves to one class again) which all show either an excess or a deficiency of certain constituents chemically regarded, are all known to possess commercial characteristics which make them unsatisfactory in some respects particularly in regard to their use as "self" whiskies (*i.e.*, in an unblended state), as far as the taste of the average consumer goes, but valuable by virtue of this excess or deficiency, where other considerations are in view. We have good reason to think that, as is the case with regard to wine or beer, certain of the chemical figures either of themselves or in groups, connote specific attributes, such as "body," fullness of flavour, delicacy, softness and so on, but, as a discussion of these matters is scarcely likely to be of general interest we refrain from going into them further.

II.

"THE DISTILLATION OF WHISKEY."

By Philip Schidrowitz, Ph.D., F.C.S., and Frederick Kaye, A.R.C.Sc.

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Regarded from a technological point of view, it is clear that the Coffey still accomplishes in a single and continuous operation that which requires a series of intermittent operations by way of the pot still, and that it has the advantage over the latter in the matter of economy of heat. Separation, rectification, and concentration are the objects of both forms of distillation, and the processes indeed, notwithstanding the widely different forms of the apparatus employed, are in many respects curiously similar. The analyser corresponds to the wash still of the pot still process, the rectifier to the low wines or spirit still. A liquid corresponding to the low wines of the pot still may be obtained (and is obtained at the sampling stage, as a matter of fact) by tapping the low wines vapour pipe D. The "ether" obtained from the top of the rectifier corresponds to the foreshots of the pot still process, and the "hot feints" of the "patent" still to the feints of the older process. Moreover, feints are run directly, as has been stated, at the beginning and end of the distillation period.

In our introductory remarks, we said that the experimental part of this paper dealt with the chemistry of the distillation process. The latter, as we have pointed out, comprises separation, concentration, and rectifica-

tion of the alcoholic fluid. The separation of alcohol from an aqueous solution and its concentration have, in view of the many researches made in the past in this connection, not occupied our attention, and it is in regard to rectification that our experiments have been made. By rectification we mean the separation of volatile substances other than water from the ethylic alcohol.

The general character of the volatile "bye" or "secondary" products or "impurities" occurring in the distillation of whiskey, more particularly in the finished product, has been the subject of a number of publications (see Schidrowitz, *Journ. Soc. Chem. Ind.*, June, 1902; and Schidrowitz and Kaye, *Journ. Soc. Chem. Ind.*, June, 1905), and this need, therefore, not be discussed here. It is with their relative quantitative occurrence and elimination that we are dealing.

Experimental.

Pot Still Distillation.—The following figures relate to a complete distillation of a Scotch pot still, all malt whiskey.

Particulars of Distillation.

Wash Still Charge.—3,868 gallons, producing 1,403 gallons of low wines at 66·3 U.P.

Low Wines Still Charge.—1,323 gallons, which yielded:

110 gallons foreshots at 24·1 O.P.
172 „ whiskey „ 19·4 O.P.
390 „ feints „ 41·5 U.P.

Pot ale, 2,465 gallons; spent lees, 651 gallons.

Results of Analyses of the Different Fractions.

Explanatory Note.—The results are expressed in parts per 100,000 parts of the liquid examined. The figures in brackets were obtained by recalculating the results to parts per 100,000 parts of absolute alcohol. In the case of the pot ale the *volatile* acid only is taken in calculating the "total." The results for the "feints only" were obtained by calculation, the others by direct analysis.

	Pot ale.	Spent lees.	Low wines.
Alcohol per cent. by vol.	Nil	Nil	20·19
Total acid	868	43·9	41·7 (206)
Volatile acid	63·6	24·9	36·5 (180)
Non-volatile acid	804·4	19·0	5·2 (26)
Ethers	12·9	40·4	70·8 (350)
Higher alcohols*	11·1	8·8	35·2 (174)
Aldehydes	2·8	2·2	2·5 (12·1)
Furfural	2·3	0·3	1·9 (9·4)
Total	92·7	95·6	152·1 (751·5)

Determinations were also made by the so-called "colorimetric higher alcohol" process, and the results obtained (using an iso-butylic control) were as follows: Pot ale, 62†; spent lees, 35†; low wines, 96·5 (478); mixed feints and foreshots, 167 (402); whiskey, 174 (255); foreshot only, 266 (374).

	Mixed feints and foreshots.	Foreshots only.	Whiskey.	Feints only.
Alcohol per cent. vol.	41·50	71·12	68·82	33·15
Total acid	20·9 (50·4)	11·5 (16)	9·6 (13·9)	23·5 (70·7)
Volatile acid	19·4 (46·8)	11·5 (16)	9·6 (13·9)	21·6 (65·0)
Non-volatile acid	1·5 (3·6)	Trace	Nil	1·9 (5·7)
Ethers	151·2 (364)	396·8 (558)	86·5 (125)	81·9 (247)
Higher alcohols*	44·2 (106)	121·0 (170)	159·2 (231)	22·5 (67·8)
Aldehydes	12·5 (30)	80·4 (113)	10·6 (15·4)	Nil
Furfural	2·8 (6·7)	2·8 (2·8)	2·6 (3·8)	3·0 (9·0)
Total	231·6 (556·7)	611·7 (859·8)	268·5 (389·1)	130·9 (394·5)

Samples of pot ale and spent lees from another distillery (also pot still pure malt) were examined, and the results obtained, expressed in the same terms as in the above table (*i.e.*, parts per 100,000 of actual liquid), were as follows:—

	Pot ale.	Spent lees.
Volatile acid	45·2	21
Ethers	14·0	15
Higher alcohol	54·8	15

In looking at the above figures it becomes apparent (1) That a very considerable proportion of the volatile secondary products or "impurities" are directly eliminated by way of the pot ale and of the spent lees, and (2) that the secondary products as a whole or in part, which come over as feints or foreshots, must undergo a considerable modification in composition in the course of their subsequent storage in the feints receiver and of their further use in the low wines still. With regard to both these points it is of interest to note that statements to the effect that nothing is eliminated in pot still distillation have frequently been made, and that this view has up to the present been very widely accepted. The explanation, no doubt, is that, broadly speaking, none of the secondary products of pot still distillation are removed in a manner visible to the *eye*, as is the case, for instance, of the fusel oil in distillation by means of the Coffey still. That these statements were purely theoretical, and not based on any experimental investigation is abundantly clear, but it is somewhat curious that the inherent fallacy of these statements, regarded even from a purely theoretical standpoint, should have passed unnoticed for many years. We refer particularly to the "impurities" eliminated by way of the feints and foreshots, and so indirectly through the spent lees, inasmuch as, in the absence of experimental work, the belief that the pot ale and spent lees as such retained none of the volatile secondary substances is perhaps excusable. If a calculation based on the figures set out above be made, it will be found that roughly two-thirds of the volatile "impurities" passing over are contained in the feints and foreshots, and one-third in the whiskey. Now, if we take the total "impurities" passing over in a first distillation (*i.e.*, of low wines only) as equal to x, then $2/3\ x$ pass to the feints receiver, and $1/3\ x$ into the whiskey. In view of the fact that the feints receiver is a vessel of limited capacity, and that under ordinary circumstances it is impossible to get rid of or to destroy feints and foreshots,§ it is in practice found necessary to try as far as is possible to use up the whole contents of the feints receiver at every subsequent operation. Matters are so arranged that the feints and foreshots amount in volume to about one-third, and the low wines to two-thirds of the whole charge of the low wines or spirit still. Assuming that the composition of the low wines remains fairly constant (and this should be so in order to obtain an even quality of whiskey), we should at the next "period" or run have a charge in the low wines still containing $2/3\ x$ derived from low wines, and (provided there was no change in the feints and foreshots) $2/3\ x$ derived from the mixed feints and foreshots, or a total of $4/3\ x$. Now to keep our whiskey even, we again wish to have only $1/3\ x$ in the same, and it will therefore be necessary on this occasion to remove $3/3\ x$ by way of foreshots and feints. This will obviously entail a smaller yield of whiskey, but for the moment that point may be neglected. At the next distillation $4/3\ x$ will have to be removed, and so on, so

* Determined by the Allen-Marquardt method.

† Doubtful results.

§ Partly on account of revenue restrictions, and partly because it would be uneconomical to waste the ethylic alcohol contained.

that at the twentieth distillation (allowing two periods to the week this would only be one-third to a quarter of the annual season) we should have to remove something like $20/3\ x$. At the end of the season we should on these lines be dealing with a spirit still charge containing something like 7 to 8 per cent. of impurities. As the contents of the feints receiver are kept at the end of the season until the beginning of the next, it is obvious that if the traditional theory were correct, we should at the end of a few years be distilling feints and foreshots containing 100 per cent. "impurities," and no alcohol at all, and that operations would then necessarily come to a stop inasmuch as each succeeding distillation would necessarily increase the volume of feints and foreshots so rapidly that a fresh receiver would be required every few weeks. The above is merely a *reductio ad absurdum* of the theory that "nothing is removed in the course of pot still distillation." It is quite evident that distillation could not be carried out on these lines, as the increasing quantity of "impurities" in the feints would speedily make it impossible to separate any "whiskey" fraction at all. As a matter of fact it occasionally does occur, where the feints and low wines have not been properly manipulated, that a run is so foul that only foreshots and feints, and no whiskey, are obtained. In such cases a liberal use of charcoal, alkali, etc., is indicated. Sometimes a distiller will apply to the Revenue authorities for a dispensation to permit the dilution of the contents of the receiver, but this indicates bad working.

To give an exact explanation of the changes taking place in the feints and foreshots during storage and redistillation is, in the present state of our experimental knowledge, not possible, but a consideration of the nature of the feints and foreshots and of the operations of the practical distiller affords some indications of the nature of the changes occurring. To begin with, there is little doubt that every successive distillation brings about a partial hydrolysis of the ethers, more particularly of the heavy oily ethers, which in any case would not distil until towards the end of the distillation, *i.e.*, when the alcohol contents of the residue of the still are low. Experimentally, the following figures obtained by us bear this out:

Hydrolysis of Ethers by Simple Distillation (Results expressed in parts per 100,000 of actual liquid).

	Before distillation.	After distillation.
Spent lees - - -	40·4	28·6
Low wines - - -	70·8	62·9
Whiskey - - -	86·5	81·5
Foreshot - - -	396·8	268·2

We have confirmed the above results, in addition, by the estimation of ethers before and after distillation, in numerous *new* whiskies.

Oxydation, there is little reason to doubt, is the main factor in regard to the modification, and consequent disappearance by way of the spent lees, of a part of the aldehydes, furfural and higher alcohols. The use of charcoal in the spirit still has been referred to. This substance appears to act by virtue of the oxygen contained in its pores. The effect of oxydation on the substances alluded to is fairly obvious. Relatively volatile products would be converted into relatively non-volatile substances. Thus acetic aldehyde, for instance, boiling at 21° C. would be transformed into acetic acid boiling at 119° C.

"Impurities" Eliminated Directly by Way of Pot Ale and Spent Lees.

The figures in the tables above afford direct proof that a very considerable proportion of the "impurities" are directly eliminated by way of the pot ale and spent lees. Taking the first set of figures we have:

Pot Ale: 2324* gallons, containing 92·7 parts of volatile "impurities" per 100,000, that is 2·15 parts for the 2324 gallons.

Spent Lees: 651 gallons, containing 95·6 per 100,000 = 0·62 part, or a total for pot ale and spent lees of 2·77 parts.

* Reduced from 2465, as total low wines were not employed.

In the same way we get for *foreshots and feints* 1·16 parts and for the *whiskey* 0·46 part, or a total for all the impurities *passing over* of 1·62 *parts*. In the distillation therefore we have:

Eliminated - - - -	2·77 parts.
Not eliminated - - -	1·62 „
Total - - -	4·39 „

that is to say roughly 63 per cent. of the total volatile bye-products of the wash (apart from alcohol and water) are directly eliminated, and 37 per cent. are retained. Of this 37 per cent., however, only about one-quarter, that is some 10 per cent. in all, actually passes into the whiskey.

III.

"THE DETERMINATION OF HIGHER ALCOHOLS IN SPIRITS."—I.

By Philip Schidrowitz, Ph.D., and Frederick Kaye, A.R.C.Sc.

[*Reprinted from "The Analyst," June*, 1905.]

Introductory.

The present experiments were undertaken with a view to examining the relative accuracy, as far as possible, of the various processes devised for the determination of the higher alcohols in spirits, and not primarily with the object of putting forward any new method of our own. The necessity for some revision of this kind is so obvious to all chemists working in this branch of applied analytical chemistry, that an apology for its publication is scarcely necessary; but we may say, in explanation of the apparently scanty nature of the present communication, that the difficulties of the work have exceeded our anticipations. The experiments were commenced some eighteen months ago, but owing to unavoidable interruptions, and to the difficulties encountered, we are not yet in a position to publish the whole of the results obtained so far, as many of these require further confirmation. We nevertheless think it desirable to make this preliminary communication now, stating the general scope of the work, the methods of purification of the substances employed, and giving one short but, we believe, important series of results, namely, those concerning the Beckmann process, of which we, in common with many others, had hoped much, but which, unfortunately, was found to give entirely unsatisfactory results. As far as we are aware, this is the first criticism of this process that has appeared, and this fact—as it may save other workers much time and trouble—we venture to put forward in extenuation of what might otherwise be regarded as a somewhat premature paper.

Scope of Work.—We had as our object the examination of such processes only as seemed *a priori* to afford a reasonable probability of success. We selected the Beckmann nitrite process (E. Beckmann, *Zeit. Unters. Nahr. u. Genussm.*, ii., 709, and ditto, iv., 1057), the Allen-Marquardt method (Analyst, 1891), as modified by one of us (Schidrowitz, *Journ. Soc. Chem. Ind.*, June, 1902), and finally the French colorimetric process (Girard et Cuniasse, "Manuel pratique de l'analyse des alcools et des spiritueux," Paris, 1899: Masson). We purposely refrained from further experiments with the German official process (Röse-Stutzer-Windisch, *Arbeit des Kaiserl. Gesundheitsa.*, 1889, v., 391), inasmuch as one of us (Schidrowitz, *loc. cit.*) had shown that for one class of spirit, namely, whiskey, this process was, at any rate, quite out of the question; it gave, in fact, negative results. As it appeared likely that this might also apply to other spirits, and as one of us had had private communications from distinguished colleagues in several parts of the world confirming these observations, we did not think it worth while to devote our time to the process.

Purification of Materials; Ethylic Alcohol.—The "pure absolute alcohol" of commerce was subjected to fractional distillation in a flask provided with a Young's "rod and disc" head until the resultant product showed no aldehyde reaction, was entirely neutral, and gave satisfactory blank tests with both the Allen-Marquardt and the colorimetric processes.

Carbon Tetrachloride.—This was first shaken with water, then boiled for several hours with chromic acid mixture, subsequently washed first with water, then with very dilute sodium bicarbonate, and finally with distilled water until neutral. The product so obtained was then further purified by distillation.

Amylic Alcohol.—Several methods of purification of the "pure" amylic alcohol of commerce (B.P., 128-132) were tried, but the following was finally adopted as being most satisfactory. The alcohol was successively shaken with dilute sulphuric acid, water, warm milk of lime, then filtered and allowed to stand overnight over solid quicklime, distilled over the latter, treated with freshly ignited sodium sulphate, distilled over the same, and finally fractionated by means of a Young's "rod and disc" apparatus. By this means we were able to obtain a product which distilled entirely within half a degree, namely, at 129·5 to 130° C.

Apparatus.—We found it a matter of very considerable difficulty to obtain an apparatus for the prolonged boiling, in the Allen-Marquardt process, of the carbon tetrachloride solution with the chromic acid mixture which was absolutely air-tight, and would permit of prolonged boiling without loss. Rubber cannot be used, and ordinary corks were found very unsatisfactory. In the same way, neither an ordinary (24-inch) Liebig nor a five-bulb condenser was capable of preventing all loss. Finally we were compelled to resort to an all-glass apparatus, consisting of a 300 c.c. Jena glass Erlenmeyer flask very carefully ground in to a 24-inch Liebig condenser, the central tube of the latter being fitted throughout its length with a Young's "rod and disc." This effectually prevents the slightest loss, and our experience is that an apparatus of this kind, if properly made, lasts for a very considerable time without cracking, and is useful for many other purposes in the laboratory, notably for the saponification of the ethers in spirits. Otherwise the apparatus used needs no special description.

A. The Beckmann Process.

This process consists substantially in a separation of the higher alcohols from the spirit (to which a certain amount of calcium chloride has been previously added) by means of carbon tetrachloride, converting the higher alcohols so isolated into their nitrites by means of nitrous acid set free by the interaction of sodium nitrite and sodium bisulphate, removing the excess of nitrous acid with sodium bicarbonate, decomposing the nitrites with sulphuric acid, and finally titrating the nitrous acid so obtained with permanganate.

Our first experiment was made (following Beckmann's instructions minutely in every detail) with a blank solution of 48·7 per cent. alcohol (by volume). The final titration in this case required some 300 c.c. $\frac{N}{80}$ permanganate, corresponding roughly to 0·8 per cent. of amylic alcohol. This was obviously an impossible result, but blank tests made with the materials (carbon tetrachloride, ice, sulphuric acid, etc.) employed failed to yield any explanation. It became therefore necessary, in the first place, to ascertain whether the fault lay in the actual process of extraction or in the treatment of the carbon tetrachloride solution with nitrous acid, etc. In order to test this point, 150 c.c. of pure carbon tetrachloride were treated with sodium bisulphate and sodium nitrite, as described by Beckmann, were then filtered, the residue being washed in accordance with the instructions, the filtrate treated with bicarbonate, water added until the excess of salt was dissolved, and the whole of the carbon tetrachloride then divided into two portions, one consisting of two-thirds of the whole, the other of the remaining third. The former was finished off according to Beckmann, and required 1·0 to 1·5 c.c. $\frac{N}{50}$ permanganate, the end point not being sharply marked. The latter was washed with small quantities of water, filtered through a dry filter, the filter washed with a little tetrachloride, and the filtrate then treated in the manner described. In this case 0·5 c.c. permanganate was required. From these results it was quite clear that the process of nitration and subsequent removal of excess of nitrous acid, etc., is not at fault. A second blank experiment with ethylic alcohol only was made, with results practically identical with the first one. It was fairly obvious, therefore, that the extraction was the weak point, and that under the conditions employed by us a certain amount of ethylic alcohol was extracted by the tetrachloride. As we followed Beckmann's instructions minutely, we could only surmise that Beckmann in his experiments employed some peculiarly favourable alcoholic strength; for in this respect his instructions are very vague, saying as he does, that the strength of the spirit to be extracted is not to be more than 50 per cent., but indicating no particular strength, as one might have expected. We therefore attempted to modify the method of extraction, finishing with the usual nitration. It struck us that in this connection the Allen-Marquardt method of extraction, which requires an approximately (according to Allen and Chattaway, *loc. cit.*) exact specific gravity of 1·1 for the solution of brine and alcohol from which the higher alcohols are extracted, might prove useful, and some experiments in this direction were therefore made; these were as follows:—

1. One hundred c.c. of spirit (strength as above) were diluted with brine until they showed a specific gravity of 1·1 (by the hydrometer), and were then extracted according to Allen. The final tetrachloride solution was then treated as in the Beckmann process. Forty c.c. permanganate were used, corresponding in terms of amylic alcohol to 1·1 grams per litre.

2. Two hundred c.c. were extracted with tetrachloride, according to the Allen method, at 15° C. exactly, and at an exact specific gravity of 1·10. After extraction the carbon tetrachloride was divided into two equal portions, the one being treated according to Beckmann, the other according to Allen.

The first required 32 c.c. permanganate (= to, roughly, 0·7 gramme per litre); the second, 2·8 c.c. $\frac{N}{10}$ baryta, of which a part was ascribable to mineral acid. If, however, in this particular case the whole of the 2·8 c.c. baryta employed were calculated in terms of amylic alcohol, it would amount to 0·24 gramme per litre, or about one-third of the blank found in the corresponding Beckmann experiment. As stated, however, a part of the Allen blank was due to mineral acid.

3. Repeated experiment 2. In this case the Beckmann portion required 31·5 c.c. permanganate (= to, roughly, 0·7 gram per litre); the Allen portion required 2·8 c.c. $\frac{N}{5}$ baryta, of which one half was due to mineral acid. The blank in this case was, therefore, 0·12 gram per litre.

4. As experiment 3, except that the specific graivty of the spirit extracted was purposely raised to 1.1235. In this case the Beckmann portion required 25 c.c. permanganate (= to, roughly, 0·4 gram per litre); the Allen portion, as before, an amount of baryta equivalent to, roughly, 0·1 gram per litre.

5. As before, but specific gravity of the fluid extracted was 1·0938. In this case the Beckmann portion required 35 c.c. permanganate (= to, roughly, 0·95 gram per litre); the Allen portion required (excluding the mineral acid) 3·8 c.c. baryta—that is, an amount equivalent to, roughly, 0·34 gram per litre.

The latter experiment indicates that in the Allen-Marquardt process it is desirable not to allow the specific gravity of the alcoholic brine to fall below 1·10.

From these experiments we conclude:—

1. That the Beckmann process as published is unworkable.

2. That the fault lies not in the latter (nitration) part of the process, but in the actual extraction.

3. That the Allen-Marquardt process of extraction undoubtedly does ultimately leave a certain quantity of ethylic alcohol in the carbon tetrachloride extract, but that for some reason unexplained the greater part of this disappears during the oxidation with chromic acid mixture, but is not converted into acetic acid. For this curious phenomenon, which may perhaps account for the somewhat anomalous results occasionally obtained by this process, we suggest the following in explanation:

(*a*) The alcohol is split up into carbonic acid and water; or (*b*) the alcohol forms, by the action of mineral acid present or produced, an organic compound, such as ethyl chloride, for example, which does not possess acid properties.

Whether this curious action affects the higher alcohols also we are not yet in a position to say, but

we hope in our second paper to be able to throw some light on this point in the course of our consideration of the Allen-Marquardt process as a whole. We are still inclined to believe that, if carefully worked, this process is still the most reliable of all those published. It appears to be very little known in some Continental quarters, particularly where the Röse process is most in favour, and in this connection we think it necessary to draw attention to some recent remarks by Karl Windisch on the subject. In a paper on "Brandy," contributed to the *Zeit. Unters. Nahr. u. Genussm.* (No. 8, October 15, 1904), he says (p. 488): "Ph. Schidrowitz examined twelve commercial whiskies, and determined the fusel-oil by the Allen-Marquardt method. In this process the fusel-oil is shaken out with *chloroform*, etc. . . . This process gives *results which are much too low*" (*c.f.* Karl Windisch, *Arbeit des Kaiserl. Gesundheitsa.*, 1889, v., 373). Now, this statement clearly indicates that Windisch is not familiar with the Allen modification of the Marquardt process, for one of the improvements due to Allen was the substitution of carbon tetra-chloride for chloroform. It is also somewhat unfortunate for the contention of Windisch that the work to which he refers as having disproved the value of the Allen-Marquardt process was published some two years before the Allen-Marquardt process saw the light. His criticism, therefore, of the work of one of us in this respect is, to say the least, somewhat premature.

IV.

"THE DETERMINATION OF HIGHER ALCOHOLS IN SPIRITS"—II.

By Philip Schidrowitz, Ph.D., and Frederick Kaye, A.R.C.Sc.

[*Reprinted from "The Analyst" of June*, 1906.]

In our first paper on this subject ("Analyst," June, 1905) we gave the details of our revision experiments on the Beckmann process, and also some few facts concerning the Allen-Marquardt process. In the present communication we wish to record a series of experiments on the Allen-Marquardt process and on the colorimetric (sulphuric acid) method.

B. The Allen-Marquardt Process.

The purification of materials and the apparatus employed were described in our previous paper, and need not, therefore, be referred to again here.

The first series of figures (Table I.) relates to the oxidation of amylic alcohol dissolved in carbon-tetrachloride with chromic acid mixture—that is to say, the quantities of the higher alcohol stated to be present were added directly to the carbon-tetrachloride, and were not obtained by extraction from a dilute alcoholic solution of brine. The object was to ascertain the behaviour of amylic alcohol as such in varying proportions and conditions of the process of oxidation.

Table I.

Oxidation of Amylic Alcohol in Carbon-tetrachloride Solution.

Carbon-tetrachloride 100 c.c.; oxidation mixture, 5 grams bichromate of potash, 30 c.c. H O, 1·5 c.c. strong H_2SO_4.)

No. of Experiment.	Weight of Amylic Alcohol present (Grams.)	Weight of Amylic Alcohol found (Grams).	Percentage Gain or Loss.	Duration of Oxidation. (Hours).	Remarks.
1	0·0990	0·0952	− 3·8	8	
2	0·1000	0·0942	− 5·8	8	
3	0·1066	0·0982	− 6·0	8	
4	0·1178	0·1007	− 14·5	8	Double quantity of oxidation mixture.
5	0·1640	0·1610	− 1·8	8	
6	0·1740	0 1760	+ 1·1	8	
7	0·1770	0 1810	+ 2·0	8	
8	0·1874	0·1582	− 15·5	8	
9	0 2367	0·2112	− 15·0	8	
10	0·3324	0·2877	− 13·4	8	Double quantity of oxidation mixture.
11	0·1864	0·1703	− 8·0	10	
12	0·1970	0 2020	+ 7·0	10	
13	0·4140	0·3362	− 18·7	8	
14	1·5338	0·1325	− 26·1	8	Triple quantity of oxidation mixture.

From the above table the following conclusions may be drawn: When the quantity of higher alcohol is not in excess of that ordinarily found by the process in commercial spirits—*i.e.*, up to 0·15 per cent.—the results are very accurate as far as the oxidation is concerned, with a boiling period of eight hours. When the quantity of higher alcohol is substantially above 0·15 per cent., a boiling of ten hours appears desirable (*cf.* Nos. 11 and 12 with Nos. 8, 9, and 10). When the quantity of higher alcohol is markedly over 0·3 per cent. (Nos. 13 and 14) a variation of the method is obviously necessary. This is of little practical importance, as commercial spirits such as whiskey and brandy rarely contain more than 0·13 per cent.

Table II. gives the results obtained by adding known quantities of amylic alcohol to 100 c.c. of pure 50 per cent. ethylic alcohol, diluting with brine and extracting with CCl in the usual manner, and then oxidizing as above.

Table II.

Results of the Allen-Marquardt Process obtained by Working with 50 per cent. Solutions of Ethylic Alcohol containing known Amounts of Amylic Alcohol.

No. of Experiment.	Weight of Amylic Alcohol taken (Grams).	Weight of Amylic Alcohol found (Grams).	Percentage Gain or Loss.	Duration of Oxidation (Hours).
15	0·0610	0·0616	+ 1·0	9
16	0·0942	0·0915	− 2·8	8
17	0·1004	0·1056	+ 5·0	9
18	0·1407	0·1390	− 1·2	8
19	0·1472	0·1415	− 3·9	10
20	0·1992	0·1624	− 18·4	8
21	0·1992	0·1654	− 17·1	8
22	0·2008	0·1693	− 15·6	8
23	0·2008	0·1725	− 14·0	8
24	0·2060	0·2187	+ 6·0	10
25	0·2077	0·2128	+ 2·4	10
26	0·3776	0·3243	− 14·0	10
27	0·3430	0·3432	− 0·5	12

The above results plainly indicate that the process as a whole gives very accurate results when the quantity of higher alcohol is not greater than, roughly, 0·15 per cent. (Nos. 15 to 19). When the percentage of higher alcohol substantially exceeds 0·15 per cent., but does not rise materially above 0·2 per cent., it is necessary to prolong the period of boiling somewhat (*cf.* Nos. 20 to 23 with Nos. 24 and 25). It is obvious, however, that quantities up to 0·35 per cent. can readily be dealt with if the duration of oxidation is extended to twelve hours. In view of the fact, to which we have alluded above, that commercial spirits rarely exceed 0·15 per cent., and that it has now been amply demonstrated that this amount can be successfully dealt with in eight hours with brisk boiling, we do not advocate extending the time to ten or twelve hours, but would suggest that if a result showing more than 0·14 per cent. be obtained, the analysis should be repeated after diluting the spirit with a convenient quantity of pure 50 per cent. alcohol, or taking a smaller quantity of the sample.

We may add that we have examined several hundred samples of commercial spirits (whiskey* more particularly) by this method, and only in the rarest cases have we obtained figures which might be regarded as doubtful. With a little practice the process works smoothly, and the abnormal results which may cause trouble to the novice will be found to become very exceptional indeed. When it is considered that the oxidation is carried out in an open vessel—*i.e.*, not under pressure in a sealed flask or tube—we think it will be admitted that the accuracy of the results obtainable is remarkable. We have little doubt that if the oxidation were performed in a pressure bottle the results might be still more satisfactory, and we intend to make some experiments in this direction in the future. We propose also to make some further experiments in which butylic and propylic alcohols will be substituted for amylic alcohol.

Before leaving the Allen-Marquardt process, it is necessary to refer to some observations and experiments we have made concerning the estimation and nature of the "mineral acid." Allen ("Analyst," 1891) states that the "mineral acid" formed in the course of the process corresponds to, roughly, 2 c.c. of decinormal baryta, and that the actual amount may be estimated by titrating in the first place with baryta, using methyl orange as indicator, and afterwards adding phenolphthalein in order to estimate the organic acids. In the course of a very large number of estimations we noticed that the amount of "mineral acid" thus determined varied widely, but that, almost without exception, it amounted (expressed in terms of the number of c.c. of decinormal baryta employed) to, roughly, one-tenth of the whole. In view of the singularity of this fact, we thought it desirable to make some estimations of chlorine in the solutions finally obtained, in order to ascertain whether this corresponds to the amount of "mineral acid" found by titration. The following figures were obtained:

TABLE III.

No. of Experiment.	Chlorine found (Grams).	Chlorine calculated (Grams.)
1	0·0023	0·0070
2	0·0012	0·0085
3	0·0012	0·0108
4	0·0039	0·0136
5	0·0014	0·0094
6	0·0007	0·0107
7	0·0006	0·0139
8	0·0014	0·0065

It will be observed that in every instance the amount found was very much smaller than the calculated quantity. Indeed, whereas the amount calculated generally approaches to or exceeds a centigram, the amount found is so small in most cases as to be within the experimental error.

It is obvious that the only mineral acid which might reasonably be supposed to be present is hydrochloric acid. These results led us to think that the so-called "mineral acid" might not be mineral acid at all, but that its apparent presence might simply be due to the fact that some organic acids are not without effect on methyl orange. It has long been known (*cf.* Glaser, "Indikatoren der Acidimetrie u. Alkalimetrie," p. 23 *et seq.*, and Schidrowitz, "Analyst," August, 1903) that acetic acid in aqueous solution reacts with methyl orange, and, on the other hand, that this reaction may be prevented, or the pink reaction colour caused to disappear by the addition of a sufficiency of a non-electrolyte such as alcohol or acetone, but we are not aware that the action of aliphatic acids on the indicator has been the subject of quantitative examination. If the explanation of the nature of the "mineral acid" which suggested itself to us were correct, it would follow: (1) That the addition of alcohol or acetone to the ultimate distillates obtained in the Allen-Marquardt process would prevent the appearance of, or, if added subsequently to the addition of the indicator, cause the disappearance of the pink coloration reputedly due to "mineral acid"; and (2) that aliphatic acids such as butyric and valeric acids would in conditions of solution approximating to those of the Allen-Marquardt process show similar results.

Ad. 1.—On examining a number of ultimate distillates of the Allen-Marquardt process on the lines indicated it was found that when an equal volume of alcohol or acetone was added to the solution prior to the addition of the indicator the colour obtained was a pure yellow, and similarly, that when the alcohol or acetone was added to the solution after the indicator had been run in, the solution, which had been a distinct pink, reverted to a plain yellow. In these same test cases also it was found (by titrating an aliquot part of the solution) that the apparent "mineral acid" was quite normal—*i.e.*, about one-tenth of the whole.

Ad. 2.—Some preliminary experiments have been made with acetic, butyric, iso-butyric, and valeric acids, and these entirely confirm the hypothesis stated above. The following figures were obtained:

TABLE IV.

Acetic Acid.

No. of Experiment.	Volume of Solution.	Acetic Acid calculated (Grams in Solution).	Acetic Acid found (Grams in Solution).	C.C. $\frac{N}{10}$ Baryta, using Methyl Orange (= apparent Mineral Acid).	C.C. $\frac{N}{10}$ Baryta, Total for Methyl-orange and Phenolphthalein Titrations.	Ratio of Total Titration to Methyl-orange Titration.
1	100 c.c.	0·1334	0·1331	3·35	22·18	6·5 : 1
2	,,	0·0667	0·0665	1·35	11·09	8·2 : 1
3	,,	0·0333	0·0332	0·68	5·54	8·2 : 1
4	,,	0·0333	0·0332	0·68	5·54	8·2 : 1
5	,,	0·0266	0·0276	0·54	4·60	8·5 : 1
6	,,	0·0200	0·0192	0·40	3·52	8·8 : 1
7	,,	0·0133	0·0146	0·27	2·44	9·0 : 1
			Butyric Acid.			
8	100 c.c.	0·1614	0·1654	2·24	18·80	8·4 : 1
9	,,	0·1077	0·1100	1·19	12·50	10·1 : 1
10	,,	0·0538	0·0544	0·54	6·19	11·4 : 1
11	,,	0·0215	0·0228	0·22	2·60	12·0 : 1

* *Cf.* Schidrowitz and Kaye, "The Chemistry of Whisky"—II., *Journ. Soc. Chem. Ind.*, June, 1905.

TABLE IV.—*continued.*

*Iso-butyric Acid.**

No. of Experiment.	Volume of Solution.	Acetic Acid calculated (Grams in Solution).	Acetic Acid found (Grams in Solution).	C.C. $\frac{N}{10}$ Baryta, using Methyl-orange (= apparent Mineral Acid.)	C.C. $\frac{N}{10}$ Baryta, Total for Methyl-orange and Phenolphthalein Titrations.	Ratio of Total Titration to Methyl-orange Titration.
12	100 c.c.	0·0835	0·0882	1·64	10·02	6·1 : 1
13	200 c.c.	0·0835	0·0896	1·47	10·18	6·9 : 1
14	100 c.c.	0·0417	0·0448	0·73	5·09	6·9 : 1
15	200 c.c.	0·0417	0·0448	0·65	5·09	7·8 : 1
16	250 c.c.	0·0417	0·0448	0·39	5·09	10·0 : 1
			Valeric Acid.			
17	50 c.c.	0·0211	0·0209	0·33	2·05	6·2 : 1
18	100 c.c.	0·0422	0·0419	0·68	4·11	6·2 : 1
19	150 c.c.	0·0422	0·0419	0·57	4·11	7·2 : 1
20	200 c.c.	0·0422	0·0419	0·49	4·11	8·3 : 1
21	250 c.c.	0·0422	0·0426	0·49	4·18	8·5 : 1

From the above figures it would appear that there is some quantitative relationship between the total acid found by titration and the apparent "mineral acid" on the one hand and between the concentration of the solution and its total volume (as compared with the amount of indicator employed) on the other. The above experiments are of a preliminary nature only, and it would be premature, therefore, to discuss the action of methyl orange on aliphatic acids further at present. We intend to pursue this matter in the future, as it presents a wider interest than that which associates it with the present communication; but as far as the latter is concerned, it is quite clear that the result of the preliminary titration for "mineral acid" in the Allen-Marquardt process may be neglected when the figure obtained is less than or roughly equal to one-tenth of the whole. In doubtful cases, or where great accuracy is desired, a gravimetric estimation of chlorine is indicated.

C. THE COLORIMETRIC (SULPHURIC ACID) PROCESS.

This process, as is now fairly well known in this country (*cf.* Girard et Cuniasse, "Manuel pratique de l'Analyse des Alcools et des Spiritueux"; Paris, Masson, 1899) is based upon the fact that certain higher alcohols, when heated with strong sulphuric acid, give rise to a more or less marked coloration, the intensity of the coloration observed being taken as a measure of the quantity of the higher alcohols present. Numerical expression is given to the colour intensity by comparing the liquid under examination with a standard control solution or solutions, iso-butyric alcohol being the standard higher alcohol generally employed for this purpose. We have repeatedly ("Analyst," June, 1905; Journal of the Society of Chemical Industry, June, 1905, etc.) pointed out the cardinal defects which such a process must possess. In view of the fact that others besides ourselves (Girard et Cuniasse, *loc. cit.*; Mohler, *loc. cit.*; Vasey, "The Analysis of Potable Spirits"; Allen, *Journal of Federated Institute of Brewing*, 1897; Veley, *Journ. Soc. Chem. Ind.*, May 15, 1906, etc., and numerous private communications to the authors) have published facts and figures demonstrating the defects of *principle* inherent in the sulphuric acid process, we cannot but express surprise at the assurance with which results based on this process are put forward. The defects of the process may be summarized under two headings: (1) Defects of Principle, and (2) Defects in Practice.

Defects of Principle.—The main objection to the process under this heading is contained in the fact that the coloration produced by various higher alcohols differs enormously. Thus, if the coloration due to iso-butyric alcohol be taken as = 10, then the colorations due to caprylic alcohol, œnanthic alcohol, amylic alcohol, and the propylic alcohols are 11, 7, 3, and 0 respectively (Mohler, *loc. cit.*). More recently Veley (*loc. cit.*) has published some experiments which throw doubt even on the comparative accuracy of these figures, and it appears probable that the colorations produced are really not due to the higher alcohols at all, but to the traces of impurities they contain. If this is so, it goes far towards explaining the widely different results obtained by different chemists when working on identical samples. However that may be, it must be remembered that the higher alcohols in any given commercial spirit are mixtures, and there is little doubt, in view of the work of Bell, Rabuteau, Ordonneau, and others, that the proportions of the various higher alcohols in any given *type* of spirit (*i.e.*, whether pot still or patent still whiskey, or brandy, etc.) differ according to the type. Moreover, in view of recent work on the formation of the higher alcohols in fermenting worts (Ehrlich), it is plain that even in the same type of spirit the composition of the "fusel" will vary considerably.

In consideration of all these facts, the argument that if a particular alcohol be chosen as the standard or "type," that all results obtained will be of a strictly comparative nature, seems to us to be absolutely untenable; for, in order that this should be the case, it would have to follow that the proportions of the various higher alcohols to one another in any given spirit would have to be a constant, and that the higher alcohol used for the control should be of the same degree of purity (or rather impurity) at all times. There is, however, another grave objection of principle to this process, and that is that there are undoubtedly other substances in spirits besides higher alcohols and besides those which are purposely removed by means of potash or some other dealdehyding reagent), which give a coloration with sulphuric acid. We are unaware of the exact nature of these substances, of their quantity, and of the intensity of coloration they produce, and from our very numerous experiments we have reason to believe that the presence of these substances is of far greater practical importance than has hitherto been suspected (*cf.* our paper on this subject, "Analyst," June, 1905, and discussion thereon). It has been suggested that even if this process does not yield results referring to higher alcohols only, it is, nevertheless, a valuable comparative index of the nature of a spirit. To this we demur, mainly because of our lack of exact knowledge concerning the substances other than higher alcohols which do produce coloration, and because our analytical experience (see tables below) has shown us that the coloration pro-

* It is obvious that the iso-butyric acid employed was not quite pure.

duced by these substances is out of all proportion to the actual higher alcohols, and that it is not even in the narrowest sense indicative of the nature of the spirit examined. It appears to us, therefore, in any case unwarrantable to place on the same numerical or quantitative basis figures referring, on the one hand, to substances of a definite chemical nature, such as the esters, acids, and aldehydes, and, on the other hand, to higher alcohols plus substances of unknown quantity or colorimetric effect. That is to say, assuming that the "colorimetric test" is an index figure of quality, it should be separately returned, and not included in the quantitative "coefficient of impurities."

Defects in Practice.—Of a very real nature is the difficulty of preparing specimens of "pure" iso-butylic (or amylic) alcohol of constant colorimetric intensity for purposes of the control or "type" solutions. If Veley's statements are accepted, this appears to be an absolutely insurmountable objection to the process. The remaining defects in practice (apart from those involving questions of principle) are mainly ascribable to the numerous modifications in detail practised by different workers. To begin with, no less than four different de-aldehyding reagents have been proposed. All of these are apparently in use, and it is unfortunately a fact that the results may differ very considerably, according to the reagent employed. The method of heating the alcoholic solution with the sulphuric acid, again, is of the greatest practical importance (see below), and yet no two workers appear to use exactly the same method. Finally, we are by no means sure that the same method of calculating the amount of "higher alcohols" from the observed coloration is employed by all chemists. We have come across results which have indicated to us that those responsible for the figures are under the apprehension that the coloration observed stands in direct ratio to the "higher alcohols." This, of course, is only the case when the liquid under examination and the control solution exhibit practically equal intensities. We now proceed to give some figures bearing on the points raised above.

1. *Figures illustrating Defects in Principle.*—In a recent number of the *Journal of the Society of Chemical Industry* (June, 1905) we published a series of analyses of whiskies in which the higher alcohols were determined by the Allen-Marquardt and the colorimetric (using an amyl alcohol control) methods respectively. The number of analyses was about one hundred. The results by the latter process are throughout much higher than those obtained by the former; but it would follow that if the composition of the "fusel" was substantially the same in all whiskies, and if the other substances producing coloration were negligible or present in quantities bearing some fixed ratio to the "fusel" (*i.e.*, higher alcohols), the ratio of the results obtained by the two processes would be practically a fixed quantity. This is, however, far from being the case, even for whiskies of the same class. The following table shows the maximum and minimum ratios observed in each individual class of whiskey for results obtained by the two processes in individual samples of the spirit:

TABLE V.

Ratios of Figures obtained by the Allen-Marquardt and Colorimetric Processes respectively (Amylic control).

Type of Whiskey.	Ratio of Allen-Marquardt to Colorimetric Result.	
	Maximum Ratio.	Minimum Ratio.
Highland malt -	1 : 6·1	1 : 2·0
Lowland „ -	1 : 5·5	1 : 1·9
Campbeltown -	1 : 4·6	1 : 2·0
Islay - - -	1 : 4·6	1 : 3·1
Grain (patent still)	1 : 6·6	1 : 0·8

It will be noticed that the variations in each class of whiskey are very large. Since the results on which the above figures are based were published, we have made a considerable number of comparative experiments, in which both the iso-butylic and amylic controls were employed. We append a few of the results obtained herewith:—

TABLE VI.

Parallel Determinations of "Higher Alcohols" by Three Methods.

No. of Experiment.	Type of Spirit.	Allen-Marquardt (Oxidation Method).	Colorimetric Methods.	
			(iso-butylic Control.	Amylic Control.
1	Patent still	300*	204*	1055*
2	„	70	64	102
3	„	58	120	370
4	„	52	46	55
5	Pot still	145	156	628
6	„	185	284	1160
7	„	147	150	430
8	„	217	208	320
9	„	351	248	768
10	Blend	146	155	447
11	„	193	212	431
12	„	92	142	354
13	„	76	76	107
14	„	77	149	191
15	„	43	115	131
16	„	81	208	245
17	„	47	181	334
18	„	53	250	410

The above results, which we have selected from a large number, are fairly representative. It will be noticed (1) that the results obtained with the iso-butylic control are generally much lower than those obtained with the amylic; (2) that in some cases the results by the oxidation and colorimetric (iso-butylic) methods approximate very closely, but that, on the other hand, they frequently diverge to a very marked extent; (3) that generally the results by the oxidation method are a good deal lower than those by the colorimetric (iso-butylic), but that this is by no means always the case; (4) that in some cases the results by all these processes are fairly close. It is obvious that the greatest divergence will occur in those cases in which the mean composition of the higher alcohols differs widely (as far as their colorimetric properties are concerned) from the alcohol used as a standard type, or when the proportion of substances other than higher alcohols, which react colorimetrically with sulphuric acid, is high. It should be noted that the above colorimetric results were obtained by heating in the water-bath for an hour with sulphuric acid, after the spirits had been de-aldehyded by means of Hewitt's reagent (phenylhydrazine *p*-sulphonate of lime).

TABLE VII.

Figures illustrative of Defects in Practice.

(a) Use of Different De-aldehyding Reagents.

No. of Experiment.†	Reagent used.	
	Hewitt's Reagent.	Meta-phenylene-diamine-hydrochloride.
1	194	184
2	182	189
3	345	227
4	150	179
5	528	480

* The numbers refer to parts per 100,000 of absolute alcohol throughout.

† The control used in the above series was iso-butylic alcohol. The heating was conducted over a naked flame.

TABLE VIII.

(b) *Use of Different Methods of Heating (Control, Iso-butylic Alcohol).*

No. of Experiment.*	Methods of Heating.	
	Naked Flame.	Water-bath (one hour).
1	194	116
2	150	116
3	345	145
4	238	131
5	227	126

In the following series are set out the results obtained by five different methods:

TABLE IX.

Process.

No. of Experiment.	Allen-Marquardt.	Colorimetric (Iso-butylic Control throughout).			
		De-aldehyding Reagent.			
		Hewitt's Reagent.		M-phenylene-diamine-hydrochloride.	
		Naked Flame.	Water-bath.	Naked Flame.	Water-bath.
1	103	194	116	184	97
2	87	150	116	179	140
3	69	160	138	154	139
4	112	345	145	227	185
5	85	238	131	244	169
6	78	258	177	274	84
7	92	227	126	191	172

All the above were whiskies.

It will be observed that the "water-bath" colorimetric results are closer to the oxidation figures than those obtained by heating over a naked flame.

De-aldehyding Reagents.—The only reagent which to our knowledge removes the aldehydes completely and without apparently bringing about any secondary reactions is phenyl-hydrazine-sulphonate of lime (Hewitt's reagent). Meta-phenylene-diamine-hydrochloride, which is strongly recommended by some French chemists, does not always remove the furfural completely from commercial spirits, as the following figures show:

* De-aldehyding reagent used in above series—Hewitt's reagent. All the above were whiskies.

TABLE X.

No. of Experiment.	Total Furfural.	Furfural not removed by M.-phenylene-diamine-hydrochloride.
1	2·9	0·75
2	2·8	0·78
3	3·0	0·92
4	2·5	0·46

These figures were obtained by working on whiskies. The quantity of the de-aldehyding salt employed was 1·5 grams for 50 c.c. of spirit. It appears that the failure of the reagent to remove furfural completely is due to a secondary reaction, for solutions of furfural in pure 50 per cent. alcohol, containing far more furfural than the whiskies referred to, were completely defurfuralized by the reagent. The same result was obtained with solutions of furfural *plus* acetic aldehyde in pure 50 per cent. alcohol. Thus, a 50 per cent. ethylic alcohol solution to which 10 parts of furfural per 100,000 of absolute alcohol had been added was completely defurfuralized by means of 1·5 grams of the reagent; and the same result was obtained with a solution containing 10 parts of furfural and 24·5 parts of acetic aldehyde. It is obvious that the non-removal of all the furfural in the case of commercial spirits is another source of error in the higher alcohol figures obtained by means of the diamine reagent, inasmuch as furfural, as is well known, acts as an intensifier to the action of the sulphuric acid. It is curious that, nevertheless, the results obtained with the reagent in question are generally lower than those recorded when Hewitt's reagent (which completely removes furfural and aldehydes) is used. We believe that this is due to the fact that the meta-phenylene-diamine reagent enters, in the case of commercial spirits, into secondary reactions with some of the less known "impurities." The facts recorded above indicate that this is so, but we have also noticed that a peculiar fluorescence is produced by this reagent, either in the spirit before distillation, or in the distillate, or in both. We have also observed the fact that in those cases in which furfural is incompletely removed the fluorescence is only marked in the spirit prior to distillation, and that the distillate is then colourless. On the other hand, when the phenomenon of fluorescence is slight in the liquid prior to distillation, but strongly developed in the distillate, the latter shows little or no furfural.

Regarding other de-aldehyding reagents, we have found phosphate of aniline useless, as its use invariably results in the presence of aniline in the distillate. We have made some experiments with caustic alkalies, but the number of experiments made is not sufficient to warrant our expressing any definite opinion. We can only say that if, after considering all the facts set out in this paper, some of our colleagues still desire to continue the use of a colorimetric higher alcohol process, they will be well advised in using Hewitt's salt as a de-aldehyding reagent. Our own conclusion regarding this matter is that there is only one process which is to any degree reliable, and that is the oxidation process. By modifying the conditions of working, the colorimetric process may be made to give almost any figure one pleases; and, indeed, in practice, we have found that results returned by different observers (both using an iso-butylic control) have differed by more than 100 per cent.

APPENDIX G.

HANDED IN BY DR. R. R. TATLOCK.

TABLE I.

ANALYSES OF WHISKEYS.

HIGHLANDS. MALT-POT-STILL.

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.
Absolute Alcohol, per cent. by weight	53·15	55·41	50·09	54·75	52·68	40·25	51·55	54·30
Absolute Alcohol, per cent. by volume	60·95	63·23	57·91	62·55	60·51	47·65	59·40	62·15
Proof Spirit, per cent. by volume	106·90	110·84	101·51	109·60	106·07	83·50	104·10	108·90
	Parts by weight in 100,000 parts by volume of Absolute Alcohol.							
Ethers calculated as Acetic Ether	89·21	128·80	117·00	72·75	154·16	64·70	93·81	55·34
Higher Alcohols calculated as Amylic Alcohol	140·43	145·27	161·07	143·80	152·70	116·68	142·64	152·16
Volatile Acids calculated as Acetic Acid	55·12	28·48	21·76	46·04	41·65	49·75	50·76	23·22
Aldehydes calculated as Acetic Aldehyde	23·59	4·05	17·26	29·97	18·59	3·21	21·04	20·16
Furfural	4·10	3·97	3·45	1·72	3·30	1·58	5·01	1·61
Total Secondary Products	312·45	310·57	320·54	294·28	370·40	235·92	313·26	252·49
Higher Alcohols (Teed's Process)	245·00	190·00	220·00	280·00	210·00	230·00	300·00	250·00
Total Secondary Products (Teed's Process)	417·02	355·30	419·47	440·48	427·70	349·00	470·62	350·33
Ratio, Allen-Marquardt to Teed	1 : 1·75	1 : 1·31	1 : 1·36	1 : 2·02	1 : 1·38	1 : 1·98	1 : 2·11	1 : 1·64

	No. 9.	No. 10.	No. 11.	No. 12.	No. 13.	No. 14.	No. 15.	
Absolute Alcohol, per cent. by weight	52·23	48·73	47·85	53·75	51·45	49·64	49·16	
Absolute Alcohol, per cent. by volume	60·05	56·52	55·60	61·60	59·30	57·43	56·97	
Proof Spirit, per cent. by volume	105·27	99·08	97·50	108·00	103·90	100·68	99·86	
	Parts by weight in 100,000 parts by volume of Absolute Alcohol.							
Ethers calculated as Acetic Ether	101·20	91·89	91·38	93·25	54·62	81·25	122·03	
Higher Alcohols calculated as Amylic Alcohol	161·35	148·15	142·06	138·50	139·67	183·87	138·94	
Volatile Acids calculated as Acetic Acid	35·91	25·48	56·11	89·06	72·85	37·63	42·10	
Aldehydes calculated as Acetic Aldehyde	12·50	8·84	15·73	22·72	31·80	15·24	26·31	
Furfural	4·13	3·53	5·19	6·28	5·91	4·36	3·96	
Total Secondary Products	315·09	277·89	310·47	349·81	304·85	382·35	333·34	
Higher Alcohols (Teed's Process)	220·00	150·00	350·00	250·00	245·00	265·00	210·00	
Total Secondary Products (Teed's Process)	383·74	279·74	518·41	461·31	410·18	403·48	404·00	
Ratio, Allen-Marquardt to Teed	1 : 1·30	1 : 1·01	1 : 2·46	1 : 1·81	1 : 1·78	1 : 1·44	1 : 1·52	

HIGHLANDS. MALT POT STILL.

	No. 16.	No. 16. No. 17.	No. 17. No. 18.	No. 18. No. 19.	No. 19. No. 20.	No. 20. No. 21.	No. 21. No. 22.	No. 23.
Absolute Alcohol, per cent. by weight	58·00	53·20	48·65	53·95	52·90	52·90	53·13	54·75
Absolute Alcohol, per cent. by volume	65·70	61·00	56·50	61·75	60·75	60·73	60·96	62·55
Proof Spirit, per cent. by volume	115·20	106·90	99·00	108·30	106·50	106·46	106·86	109·60
	Parts by Weight in 100,000 parts by Volume of Absolute Alcohol.							
Ethers calculated as Acetic Ether	99·11	46·52	86·25	68·83	69·78	45·01	91·03	69·03
Higher Alcohols calculated as Amylic Alcohol	73·51	169·60	167·30	190·40	180·25	132·28	145·94	129·58
Volatile Acids calculated as Acetic Acid	21·92	29·50	54·22	54.28	67·21	27·66	27·52	23·02
Aldehydes calculated as Acetic Aldehyde	22·83	24·69	33·89	25·00	7·66	10·30	32·40	12·00
Furfural	2·28	6·55	5·10	6·27	3·18	3·70	7·34	6·39
Total Secondary Products	219·65	276·86	346·76	344·78	328·08	218·94	304·23	240·02
Higher Alcohols (Teed's Process)	200·00	310·00	305·00	400·00	260·00	380·00	270·00	140·00
Total Secondary Products (Teed's Process)	346·65	417·26	484·46	554·38	407·83	566·67	428·29	250·44
Ratio, Allen-Marquardt to Teed	1 : 2·76	1 : 1·83	1 : 1·82	1 : 2·10	1 : 1·44	1 : 2·87	1 : 1·85	1 : 1·09

	No. 24.	No. 25.	No. 26.	No. 27.	No. 28.	No. 29.	No. 30.	No. 31.
Absolute Alcohol, per cent. by weight	56·15	55·50	48·80	53·65	53·80	52·95	47·70	38·50
Absolute Alcohol, per cent. by volume	63·95	63·35	56·60	61·45	61·60	60·80	55·45	45·70
Proof Spirit, per cent. by volume	112·00	111·00	99·20	107·70	108·00	106·60	97·20	80·10
	Parts by Weight in 100,000 parts by Volume of Absolute Alcohol.							
Ethers calculated as Acetic Ether	85·31	63·52	80·05	69·34	62·85	54·85	79·35	92·68
Higher Alcohols calculated as Amylic Alcohol	126·60	133·96	142·30	140·25	110·60	127·42	153·59	132·00
Volatile Acids calculated as Acetic Acid	30·02	24·62	76·42	42·91	38·92	35·54	34·62	31·06
Aldehydes calculated as Acetic Aldehyde	23·43	13·45	12·34	16·26	16·23	30·89	35·06	16·41
Furfural	7·03	2·01	2·51	3·97	2·44	4·11	6·31	2·63
Total Secondary Products	272·39	237·56	313·62	272·73	231·04	252·81	308·93	274·78
Higher Alcohols (Teed's Process	330·00	270·00	Not done	280·00	180·00	300·00	300·00	200·00
Total Secondary Products (Teed's Process)	475·79	373·60		412·48	300·44	425·39	455·24	342·78
Ratio, Allen-Marquardt to Teed	1 : 2·62	1 : 2·01		1 : 2·00	1 . 1·63	1 : 2·36	1 : 1·96	1 : 1·51

Lowlands. Malt-Pot-Still.

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.
Absolute Alcohol, per cent. by weight	55·95	52·68	48·73	54·10	55·40	62·15	52·45	52·70	53·95
Absolute Alcohol, per cent. by volume	63·75	60·51	56·52	61·95	63·25	69·75	60·25	60·55	61·75
Proof Spirit, per cent. by volume	111·7	106·07	99·08	108·50	110·80	122·20	105·70	106·10	108·30
	Parts by weight in 100,000 parts by volume of Absolute Alcohol.								
Ethers calculated as Acetic Ether	34·52	85·80	77·87	63·87	57·05	47·78	82·52	66·53	79·80
Higher Alcohols calculated as Amylic Alcohol	240·66	103·49	118·50	140·25	29·40	141·35	129·07	142·60	118·28
Volatile Acids calculated as Acetic Acid	4·70	39·86	21·23	34·78	4·78	8·60	39·71	13·85	6·12
Aldehydes calculated as Acetic Aldehyde	31·17	16·52	17·69	28·22	33·59	17·92	10·10	12·35	16·20
Furfural	3·76	4·13	2·65	4·06	4·74	2·87	5·85	5·82	5·66
Total Secondary Products	314·81	249·80	237·94	271·13	229·56	218·52	267·25	241·15	226·06
Higher Alcohols (Teed's Process)	not done	210·00	230·00	310·00	300·00	350·00	190·00	282·00	283·00
Total Secondary Products (Teed's Process)	not done	356·31	349·44	440·88	400·16	427·17	328·18	480·55	390·78
Ratio, Allen-Marquardt to Teed	not done	1 : 2·03	1 : 1·95	1 : 2·21	1 : 2·32	1 : 2·48	1 : 1·47	1 : 1·97	1 : 1·24

Islays. Malt-Pot-Still.

	No. 1.	No. 2.	No. 3.	No. 4.
Absolute Alcohol, per cent. by weight	55·41	51·50	54·00	55·40
Absolute Alcohol, per cent. by volume	63·23	59·35	61·80	63·05
Proof Spirit, per cent. by volume	110·84	104·00	108·30	110·40
	Parts by weight in 100,000 parts by volume of Absolute Alcohol.			
Ethers calculated as Acetic Ether	78·05	60·29	59·38	48·31
Higher Alcohols calculated as Amylic Alcohol	161·70	141·30	145·00	130·20
Volatile Acids calculated as Acetic Acid	17·11	32·41	31·07	22·86
Aldehydes calculated as Acetic Aldehyde	31·74	31·69	30·36	19·82
Furfural	6·29	5·82	3·25	4·75
Total Secondary Products	294·99	271·51	269·06	225·94
Higher Alcohols (Teed's Process)	210·00	280·00	200·00	285·00
Total Secondary Products (Teed's Process)	343·29	410·21	324·06	380·74
Ratio, Allen-Marquardt to Teed	1 : 1·30	1 : 2·00	1 : 1·38	1 : 2·19

Campbeltowns. Malt-Pot-Still.

	No. 1.	No. 2.
Absolute Alcohol, per cent. by weight	51·79	53·80
Absolute Alcohol, per cent. by volume	59·61	61·60
Proof Spirit, per cent. by volume	104·50	108·00
	Parts of weight in 100,000 parts by volume of Absolute Alcohol.	
Ethers calculated as Acetic Ether	85·62	61·42
Higher Alcohols calculated as Amylic Alcohol	206·70	139·58
Volatile Acids calculated as Acetic Acid	56·35	31·16
Aldehydes calculated as Acetic Aldehyde	33·54	32·45
Furfural	3·77	3·23
Total Secondary Products	385·98	267·84
Higher Alcohols (Teed's Process)	260·00	230·00
Total Secondary Products (Teed's Process)	439·28	358·26
Ratio, Allen-Marquardt to Teed	1 : 1·26	1 : 1·65

Irish. Malt-Pot-Still.			American. "Rye" and "Bourbon."				
	No. 1.	No. 2.		No. 1.	No. 2.	No. 3.	No. 4.
Absolute Alcohol, per cent. by weight	38·65	63·50	Absolute Alcohol, per cent. by weight	38·25	43·90	36·55	38·45
Absolute Alcohol, per cent. by volume	45·85	71·00	Absolute Alcohol, per cent. by volume	45·45	51·50	43·60	45·65
Proof Spirit, per cent. by volume	80·40	124·40	Proof Spirit, per cent. by volume	79·60	90·30	76·40	80·00
	Parts by weight in 100,000 parts by volume of Absolute Alcohol.			Parts by weight in 100,000 parts by volume of Absolute Alcohol.			
Ethers calculated as Acetic Ether	44·22	38·42	Ethers calculated as Acetic Ether	114·30	111·06	119·08	119·52
Higher Alcohols calculated as Amylic Alcohol	169·10	154·93	Higher Alcohols calculated as Amylic Alcohol	102·55	176·50	151·37	177·34
Volatile Acids calculated as Acetic Acid	49·23	4·55	Volatile Acids calculated as Acetic Acid	80·47	65·24	132·11	119·90
Aldehydes calculated as Acetic Aldehyde	4·34	21·12	Aldehydes calculated as Acetic Aldehyde	27·58	17·01	28·67	32·85
Furfural	2·73	3·02	Furfural	3·86	1·95	2·90	3·31
Total Secondary Products	269·62	222·04	Total Secondary Products	328·76	371·76	434·13	452·92
Higher Alcohol (Teed's Process)	not done	320·00	Higher Alcohols (Teed's Process)	160·00	210·00	230·00	320·00
Total Secondary Products (Teed's Process)	not done	387·11	Total Secondary Products (Teed's Process)	386·21	405·26	512·76	595·58
Ratio, Allen-Marquardt to Teed	not done	1 : 2·49	Ratio, Allen-Marquardt to Teed	1 : 1·56	1 : 1·89	1 : 1·52	1 : 1·80

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.
Absolute Alcohol, per cent. by weight	53·65	53.50	55·95	37·80	52·25	81·10	54·10	55·30
Absolute Alcohol, per cent. by volume	61·50	61·35	63·75	44·95	60·05	86·40	61·95	63·15
Proof Spirit, per cent. by volume	107·80	107·50	111·70	78·70	105·30	151·30	108·50	110·60
	Parts by weight in 100,000 parts by volume of Absolute Alcohol.							
Ethers calculated as Acetic Ether	28·61	22·04	24·85	50·90	27·86	28·01	31·05	50·56
Higher Alcohols calculated as Amylic Alcohol	40·24	41·78	32·47	47·08	47·05	68·47	183·50	40·15
Volatile Acids calculated as Acetic Acid	32·83	11·66	8·47	26·69	11·94	2·86	13·56	22·28
Aldehydes calculated as Acetic Aldehyde	12·95	10·50	1·75	5·60	6·70	6·90	3·25	1·59
Furfural	·40	·31	·50	·11	·15	·10	·13	·17
Total Secondary Products	115·03	86·29	68·04	130·38	93·70	106·34	231·49	114·75
Higher Alcohols (Teed's Process)	50·00	114·00	111·00	98·00	200·00	not done	not done	268·00
Total Secondary Products (Teed's Process)	124·79	158·51	146·57	181·30	246·65			342·75
Ratio, Allen-Marquardt to Teed	1 : 1·25	1 : 2·73	1 : 3·42	1 : 2·08	1 : 4·25		*Note.*	1 : 6·67 *Note.*

Note No. 7.—This is an all-Malt Patent Still Whiskey, and, although run in the Patent Still, has the composition of Pot Still Whiskey, with the exception that the Furfural is much lower in amount than in the case of any Malt Whiskey. The reason of its showing a large proportion of Higher Alcohols like Pot Still Whiskey is that it was run at a low strength as Pot Still Whiskeys are, whereas Patent Still Whiskeys are run at a comparatively high strength.

Note No. 8.—This is an all-Malt Patent Still Whiskey, and has the composition of ordinary Patent Still Whiskeys made from mixed grist of maize, rye, and barley malt. The reason of this similarity of composition is simply that it was run in a Patent Still, but at high strength.

BLENDS.

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.
Absolute Alcohol, per cent. by weight	49·45	49·40	40·35	41·35	39·15	38·90	38·55	39·00
Absolute Alcohol, per cent. by volume	57·25	57·20	47 70	48·80	46·40	46·10	45·75	46·25
Proof Spirit, per cent. by volume	100·30	100·20	86·69	85·50	81·40	80·90	80·20	81·00
	Parts by weight in 100,000 parts by volume of Absolute Alcohol.							
Ethers calculated as Acetic Ether	64·02	56·10	59·14	34·26	60·69	45 81	41·40	52·33
Higher Alcohols calculated as Amylic Alcohol	71·71	86·05	85·36	75·63	87 24	82·90	50 01	77·15
Volatile Acids calculated as Acetic Acid	44·01	33·56	44·28	22 15	38·80	35·74	13·12	41·50
Aldehydes calculated as Acetic Aldehyde	8·72	7·01	3·46	5·41	4·31	4·55	1·26	7·62
Furfural	1·93	2·10	1·57	·87	1·03	1·73	·43	2·58
Total Secondary Products	190·39	184·82	193·81	138·32	192·07	170·73	106·22	181·18
Higher Alcohols (Teed's Process)	147·80	200·00	not done	not done	not done	not done	not done	not done
Total Secondary Products (Teed's Process)	266·48	298·77						
Ratio, Allen-Marquardt to Teed	1 : 2·06	1 : 2·32						

	No. 9.	No. 10.	No. 11.	No. 12.	No. 13.	No. 14.	No. 15.	No. 16.
Absolute Alcohol, per cent. by weight	41·35	39·85	40·40	39·40	36·75	38·50	41·50	39·65
Absolute Alcohol, per cent. by volume	48·80	47·20	47·80	46·75	43·85	45·70	48·95	46·95
Proof Spirit, per cent. by volume	85·50	82·70	83·70	81·90	76·80	80·10	85·90	82·30
	Parts by weight in 100,000 parts by volume of Absolute Alcohol.							
Ethers calculated as Acetic Ether	79·34	73·56	92·05	80·14	54·58	52·27	64·72	73 02
Higher Alcohols calculated as Amylic Alcohol	48 71	84·38	106 52	111·25	78·23	82·80	85·70	78·64
Volatile Acids calculated as Acetic Aldehyde	59·47	27·94	50·22	17·43	49·32	100·13	46·58	25·53
Aldehydes calculated as Acetic Aldehyde	10·25	2·27	15·68	16·07	11·41	16·41	7·66	26·60
Furfural	2·88	1·60	3·17	2·21	·96	·92	1·02	1·06
Total Secondary Products	200·65	149·75	267·64	227·10	194·50	252·53	205·68	204·85
Higher Alcohols (Teed's Process)	not done	not done	250·00	290·00	150·00	140·00	241·80	105·00
Total Secondary Products (Teed's Process)			411·12	405·85	266·27	309·73	361·78	231·20
Ratio, Allen-Marquardt to Teed			1 : 2·35	1 : 2·60	1 : 1·92	1 : 1·69	1 : 2·82	1 : 1·33

(Signed) ROBERT RATTRAY TATLOCK.

TABLE II.

Maximum, Minimum, and Average Analyses of 75 Samples of Whiskey, 31 Malt-Pot-Still (Highland), 9 Malt-Pot-Still (Lowland), 4 Malt-Pot-Still (Islay), 2 Malt-Pot-Still (Campbeltown), 2 Malt-Pot-Still (Irish), 4 American, 7 Grain Patent Still, and 16 Blends.

	Highlands, 31 samples.	Lowlands, 9 samples.	Islays, 4 samples.	Campbeltowns, 2 samples.	Irish, 2 samples.	American, 4 samples.	Grains, 7 samples.	Blends, 16 samples.
Ethers—								
Maximum	154·16	85·80	78·05	85·62	44·22	119·52	50·90	92·05
Minimum	45·01	34·52	48·31	61·42	38·42	111·06	22·04	33·56
True Average	83·06	66·19	61·51	73·52	41·32	115·99	33·26	58·96
Higher Alcohols—								
Maximum	190·40	240·66	161·70	206·70	169·10	177·34	68·47	111·25
Minimum	73·51	103·49	130·20	139·58	154·93	102·55	32·47	48·71
True Average	144·61	140·40	144·55	173·14	162·01	156·99	45·32	80·76
Volatile Acids—								
Maximum	89·06	39·86	32·41	56·35	49·23	132·11	32·83	100·13
Minimum	21·76	4·70	17·11	31·16	4·55	65·24	2·86	13·12
True Average	41·78	17·35	25·86	43·75	26·89	99·43	16·67	40·61
Aldehydes—								
Maximum	35·06	33·59	31·74	33·54	21·12	32·85	12·95	26·60
Minimum	3·21	4·70	19·82	32·45	4·34	17·01	1·59	1·26
True Average	19·48	20·42	28·40	32·99	12·73	26·53	7·66	9·29
Furfural—								
Maximum	7·34	5·85	6·29	3·77	3·02	3·86	·50	3·17
Minimum	1·58	2·65	3·25	3·23	2·73	1·95	·10	·43
True Average	4·19	4·39	5·02	3·50	2·87	3·00	·25	1·63
Total Secondary Products—								
Maximum	382·35	314·81	294·99	385·98	269·62	452·92	130·38	267·64
Minimum	218·94	218·52	225·94	267·84	222·04	328·76	68·04	106·22
True Average	294·41	282·03	265·37	326·91	245·83	396·89	102·08	191·25
Higher Alcohols. Dr. Teed's Process								
Maximum	(1) 400·00	(2) 350·00	285·00	260·00	(3) 320·00	320·00	(4) 268·00	(5) 290·00
Minimum	140·00	190·00	200·00	230·00	320·00	160·00	50·00	105·00
True Average	225·00	269·00	244·00	245·00	320·00	230·00	140·00	190·57
Total Secondary Products. Dr. Teed's Process—								
Maximum	566·67	480·55	410·21	439·28	387·11	595·58	342·75	411·12
Minimum	250·44	328·18	324·06	358·26	387·11	386·21	124·79	231·20
True Average	411·08	396·68	364·57	398·77	387·11	474·95	200·09	318·90

(1) 30 samples. (2) 8 samples. (3) 1 sample only. (4) 6 samples. (5) 8 samples.

(Signed) ROBERT RATTRAY TATLOCK.

TABLE III.

Analyses of 6 Typical Whiskeys employed in the Physiological Tests by Robert Rattray Tatlock, and Total Quantities of Secondary Products consumed by him.

	Parts by weight per 100,000 volumes of Absolute Alcohol.							
	Lowland Malt, Pot Still. Samples 7, 8, 9.				Patent Still. Samples 1, 2, 3.			
	Sherry Wood. Bonded 20/12/00.	Plain Wood. Bonded 24/11/00.	Plain Wood. Bonded 6/4/05.	From half a gallon of Pot Still (In Grains).	Sherry Wood. Bonded 28/8/00.	Plain Wood. Bonded 18/10/00.	Plain Wood. Bonded 7/7/05.	From half a gallon of Patent Still (In Grains).
Ethers calculated as Ethyl Acetate	82·52	66·53	79·80	15·97	28·61	22·04	24·85	5·47
Higher Alcohols calculated as Amylic Alcohol	129·07	142·60	118·28	27·08	40·24	41·78	32·47	8·29
Volatile Acids calculated as Acetic Acid	39·71	13·85	6·12	4·14	32·83	11·66	8·47	3·84
Aldehydes calculated as Acetic Aldehyde	10·10	12·35	16·20	2·68	12·95	10·50	1·75	1·81
Furfural	5·85	5·82	5·66	1·21	·40	·31	·50	·09
Total Secondary Products	267·25	241·15	216·06	51·08	115·03	86·29	68·04	19·50
Absolute Alcohol, per cent. by weight	52·45	52·70	53·95	—	53·65	53·50	55·95	—
Absolute Alcohol, per cent. by volume	60·25	60·55	61·75	—	61·50	61·35	63·75	—
Proof Spirit, per cent. by volume	105·70	106·10	108·30	—	107·80	107·50	111·70	—

TABLE IV.

Analyses of Spent Wash and Spent Lees from Kirkliston Distillery.

The object of making these analyses was to ascertain the respective proportions of Bye-products, Higher Alcohols, Ethers, Volatile Acids, Aldehydes, and Furfural, carried away in the Spirit, the Spent Wash and the Spent Lees respectively. For this purpose the whole production of a period is taken, in which 40,000 gallons of Fermented Wort, or Wash, are distilled, yielding of Whiskey at 11 O.P. 4,000 gallons (equal to 2,536 gallons of Absolute Alcohol), 8,000 gallons of Spent Lees, and 28,000 gallons of Spent Wash. The following table shows the compositions of the three products in grains by weight per 100,000 fluid grains of the products respectively, as well as the total amount of Bye-products removed by each of the three:—

	Parts in 100,000 Parts.			Total Weight, in Grains, removed in the Period.		
	Absolute Alcohol.	Spent Wash.	Spent Lees.	Absolute Alcohol.	Spent Wash.	Spent Lees.
Higher Alcohols	171	4·19	8·80	303,559	82,124	49,280
Ethers	67	8·22	21·20	118,938	161,112	119,224
Volatile Acids	26	48·60	42·00	46,155	952,560	285,200
Aldehydes	22	none	none	39,054	none	none
Furfural	5	·86	·05	8,876	16,856	280

The following shows the percentage of the ingredients which pass away in the three different products:—

	Absolute Alcohol.	Spent Wash.	Spent Lees.	Total Secondary Products in Spent Wash and Spent Lees exclusive of Volatile Acids.	Total Secondary Products in Spent Wash and Spent Lees inclusive of Volatile Acids.
Higher Alcohols	69·8	18·9	11·3	47·6	76·3
Ethers	29·8	40·3	29·9		
Volatile Acids	3·7	77·2	19·1		
Aldehydes	100·0	none	none		
Furfural	34·2	64·7	1·1		

(Signed) Robert Rattray Tatlock.

APPENDIX H.

Handed in by Mr. H. S. Keith.

EPITOME OF STATUTES, ETC., RELATING TO THE MANUFACTURE OF SPIRITS IN SCOTLAND.

Iter Camerarii. Chamerlan Ayr. Sec. 26. The date of this manuscript is about the 14th Century. It is there reported that "Malt makers mak both evil and good malt together, where they ought to make them sundry and sell them at sundry prices; that they steep not their beer enough, for great haste in the making of it."

In 1503 (James IV.) it is enacted that the "malt makers take nae mair for the making of one chalder of malt, but one boll of beer."

In 1555, chap. 14, the Burghs of Ayr, Irvine, Glasgow, Dumbarton, and others allowed to furnish aqua vitæ, ale, and bread to the inhabitants of the Isles, in barter in spite of the Acts prohibiting the export of victuals.

In 1579, because victual was scant, James VI. prohibited the making of aqua vitæ for nine months, subject to a privilege to lords, barons and others of such degree, to make, brew, and distil their own malt and stuff within their own houses.

1641. c. 118. Importation of aqua vitæ or strong waters prohibited "which might more conveniently be made within the Kingdom to the benefit of the natives."

1655. Excise for all aqua vitæ or strong waters made or distilled within Scotland, whether of domestic or foreign spirits or materials per English gallon, or quart Scots—2d.

1661. Car. II., cap. 128. 384,000 pounds to be raised out of the beer, ale, aqua vitæ, and strong waters at the rate of two merks Scots upon ilk boll of malt brewed and sold within this Kingdom, three shillings upon ilk pint of aqua vitæ or strong waters not made of malt brewed and sold within the Kingdom, six shillings upon ilk pint of foreign aqua vitæ or strong waters. . . .

1669. c. 36: "Act for regulating the prices of ale and drinking beer." . . . Privy Council, after consideration had of the ordinary rates of rough beer and barlie for the tyme, to regulate and set down the prices of all ale and drinking beer.

1695. W. cap. 52. The estates of Parliament for maintenance of a standing army and defence of the coast granted an additional fund to the supplies, over and above existing excises "of two pennies (Scots) upon the pint of ale and beer brewed for sale and sold, as also two shillings (Scots) upon each pint of aqua vitæ and strong waters brewed (or made of malt) to be vended or sold within the Kingdom, and likewise an additional excise of two shillings (Scots) upon each pint of aqua vitæ and strong waters brewed not made of malt, excepting what is made of wine." . . . It further repealed the excise on malt, and granted in lieu of it three shillings (Scots) more upon "ilk pint of aqua vitæ or strong waters not made of malt, brewed and sold within the Kingdom, and six shillings upon ilk pint of aqua vitæ, brandy, or some strong waters imported"—the excise in lieu of the malt tax being annexed to the Crown, the other portion of the excise being unannexed. The excise upon ale used to be collected from the brewers, and the excise on aqua vitæ and strong waters used to be collected from the retailers. (The "pint" here referred to is the Scotch pint, equal to half-gallon English measure.)

In 1700 the states of Parliament (Scotland) granted authority for a manufactory in Glasgow for sugar, and the distilling of brandy and strong waters from malt, sugar and other liquors (except wine) upon the preamble that these were as good as could be imported from France, and profitable, "both for the consumpt of malt, which is a native product, and for convenience within the country and for foreign trade," in view of the possible prohibition of French brandy and that the manufacture of sugar and distilling of strong waters deserved encouragement."

1736. 9 Geo. II., s. 22. . . . nothing in this Act contained shall extend to charge with any of the duties directed to be paid . . . any spirits made or distilled from malt and retained and consumed within that part of Great Britain called Scotland which spirits are commonly called or known by the name of aqua vitæ.

1751. 24 Geo. II., s. 26. Foregoing section repeated.

1793. 33 Geo. III. cap. 69. "Whereas it is expedient to repeal the duties on coals, culm or cinders brought coastwise into Scotland and to substitute other duties in lieu thereof. II. . . . from and after the 10th October, 1793, every person who shall retail any spirits made or distilled from malt, corn, grain, barley, beer, big or other British materials, and which spirits are commonly called and known by the name of 'aqua vitæ' in that part of Great Britain called Scotland, shall take out an excise license."

V. All and every person in that part of Great Britain called Scotland "who shall sell . . . any spirits made or distilled from malt, corn, grain, barley, beer, big, or other British materials commonly called and known by the name of 'aqua vitæ,' unmixed or mixed with themselves or any other ingredients in any less quantity than half a gallon shall be deemed and taken to be a retailer."

1785. 25 Geo. III. cap. 22. "Whereas . . . it was . . . enacted . . . to authorise . . . within the Highland Parishes of districts, to erect, work, and keep stills, the cubical contents of which, including the head, should not exceed twenty gallons, English measure, or at the most, thirty gallons, nor in any case be of less than the first-mentioned size. And whereas it now appears that the purposes which the said Act was intended to answer, with respect to the Revenue, and the improvements of agriculture in the parishes and districts aforesaid, have been in a great measure defeated. . . .

Sec. 2. Be it further enacted . . . it shall and may be lawful to and for the Commissioners of His Majesty's Excise in Scotland, or the major part of them . . . to authorise persons, qualified as hereinafter mentioned, within the several Counties of Orkney, Caithness, Sutherland, Ross, Cromarty, Inverness, Argyle, Bute, Stirling, Clackmannan, Perth, Dumbarton, Aberdeen, Forfar, Kincardine, Banff, Nairn, and Elgin (excepting those parts of the Counties of Dumbarton, Stirling, Clackmannan and Perth, hereinafter described), to erect, keep, and work stills, the cubical contents of which respectively shall not be less than thirty, nor more than forty gallons of English measure, including their respective heads, and to distil and draw off spirits from the barley, bear or big of the growth of the said counties, during the term of one year, and for no longer or shorter space, from the date of the Commission or Licence, and to use, sell or dispose of the spirits so distilled, subject to the restrictions and regulations, and on payment of a composition or licence duty at the rate of twenty shillings sterling for each English gallon of the contents of such still. . . .

Sec. 8. And whereas the said privilege and exemption are hereby granted for the purpose of promoting agriculture and improvement in the said highland counties and districts, and for accommodating the inhabitants thereof with spirits drawn from their own grain at moderate rates, and it has been computed that a still of forty gallons . . . . will manufacture into good spirits 250 bolls, Linlithgow measure, of the barley, bear, or big of these counties, and no more, which will produce at an average 1,660 gallons of pure spirits, and that the produce of smaller stills will be in a similar proportion. Be it therefore enacted that when a licence shall be taken out, and the composition duty paid for a still of forty gallons, such duty shall be held to be a composition for the duty on malt to the extent of 250 bolls, Linlithgow measure, and no more, and for the duty on the spirits manufactured in such still to the extent of 1,660 gallons English and no more . . . .

Sec. 10. . . . No spirits the produce of such licensed stills shall be allowed to pass, either with or without a permit into the southern parts of the Kingdom, either by land, . . . or by water carriage . . . and all spirits distilled to the west and north of a prescribed line that shall be found passing to or in other parts of the Kingdom, either with or without a permit, shall be liable to seizure.

1786.—26 Geo. III., cap. lxiv. . . . That the several rates and duties granted and imposed by any

Act or Acts of Parliament now in force, or which stand and remain discontinued or suspended, for any time or term upon any wort, wash, or other liquor or any mixture with the same, for extracting of low wines or spirits in Scotland, or upon the low wines or spirits there made or manufactured, or upon any licence required to be taken by any distiller or maker of spirits from corn or malt in Scotland . . . shall be discontinued for the space of two years. . . .

Sec. 2. . . . There shall be substituted, charged and paid . . . . by the distillers or makers of spirits in that part of Great Britain called Scotland, for and during the aforesaid term of two years, the rates and duties following, that is to say, for and upon every gallon, English wine measure, of the capacity or content of every still . . . . for the making of low wines or spirits from corn, grain, malt, tilts, cyder, or perry, or other wash or liquor made or brewed from any sort or kind of British materials, or any mixture with the same, the yearly sum of one pound ten shillings sterling.

. . . . for making low wines or spirits from molasses or sugar, or any mixture therewith, the yearly sum of two pounds ten shillings sterling.

. . . . from foreign refused wine, or foreign cyder or wash prepared from foreign materials, except molasses and sugar, or any mixture therewith, the yearly sum of three pounds sterling.

Note.—This Act does not differentiate the Highlands, but the Act 28 Geo. III. c. 46, sec. 28 declares that the Act 25 Geo. III. c. 22 is not repealed or altered, so far as it affects the Highlands.

1788. 28 *Geo. III., cap. xlvi.*

. . . . . .

For and upon every gallon . . . . of the cubical content of each and every still, including the head . . . . in . . . . Scotland, for the making of low wines or spirits from corn, grain, malt, tilts, cyder or perry, or other wash, or liquor made or brewed from any sort of British materials, or any mixture therewith, the sum of three pounds.

. . . . For making low wines or spirits from molasses or sugar, or any mixture therewith, the sum of five pounds.

. . . . from foreign refused wine, or foreign cyder, or wash prepared from foreign materials (except molasses and sugar) or any mixture therewith, the sum of six pounds.

Note.—The distinction between Highland and Lowland whiskey was further accentuated by the Act of 1793, 33 Geo. III. cap. 61, which raised the rates for four categories of stills in Scotland (excluding the Highlands).

1793.—Low wines or spirits from corn, grain, malt, tilts, cyder, or perry, or other wash or liquor, nine pounds per gallon cubic contents. From molasses or sugar, fifteen pounds.

From foreign materials, except molasses and sugar, eighteen pounds.

This Act, by section XXI., authorised exceptional treatment for the Highlands . . . . "to distil and draw off spirits from the barley, beer, or big, of the growth of the said counties, £1 10s. for each gallon cubic contents, in place of the whole rates and duties imposed on the distilling of wash, low wines or corn spirits."

Sec. 26 restricts the sale of such Highland whiskey to the Highlands exclusively.

38 Geo. III., c. 92, Sec. 7 obliges every distiller to give every week a declaration of the respective quantities of malt and of unmalted grain used by him.

Sec. 8 enacts that all barley, beer, big, or other corn or grain which shall be used unmalted or raw for distillation in Scotland should pay the like duty that malt now pays.

In 1800 (39 and 40 George III. cap 73), except in the Highlands, the duties of Excise per gallon cubic contents of still for distilling low wines or spirits for consumption in Scotland from corn, grain, malt, tilts, cyder or perry or other wash or liquor, or of British materials, or any mixture, was £108; of molasses or sugar, £670; of foreign materials, £760. Scottish spirit from home materials was heavily subsidised, but no obligation was imposed on the distiller to use malt only in the Lowlands; while in the Highlands, by section 15 the restriction was continued to distil from native-grown barley, beer, or big only, the prescribed area being reduced by the elimination of an intermediate area. The Lowland distiller was called on by Sec. 2 12 hours before beginning to mash, to give in writing a detail of the malt weight of malt, and unmalted grain, or of molasses, sugar, or foreign material. The product was undoubtedly Scotch whiskey.

1803.—Barley malt, or beer or big malt, are treated as different by 43 Geo. III. c. cxlv. A tax of 2s. was to be paid on all malt except that made from beer or big, and by sec. 7 malting from barley and other corn and grain, and malting from beer or big only must be carried on "completely separate and apart and under a different roof." A maltster of barley could not be a maltster of beer or big, nor have any interest in the latter business under a penalty of £200.

1806.—By the Act of Geo. III. c. 102 sec. xix., the Highland distiller is called on to give in every six weeks an account of the quantity of malted and unmalted corn or grain used in the making of wort or distilling wash, indicating that raw grain was also being used at this date in the Highlands. The same Act prescribes that for "extracting spirits in the Highlands of Scotland, oats or barley, beer or big, of the growth of the Highlands shall be exclusively used."

1810.—By the Act of Geo. III. cap. 79, the distilling from sugar is permitted to the distillers in the Lowlands of Scotland in every and any year that the distilling of spirits from corn or grain is prohibited.

1814.—The Excise Act 54 Geo. III. cap. 172, narrates that "it is expedient that in England and Scotland the distillation and manufacture of spirits should (as nearly as may be) be under and subject to the same rules, regulations, and provisions." It provides for duties for distilling from malt, corn, grain, or tilts, cyder, perry, molasses or sugar. "Beer" and "big" drop out, and the Act seems to apply equally to the Highlands and Lowlands of Scotland, but a further Act (56 Geo. III. cap. 106 sec. vi.) expressly abolishes the distinction of districts in Scotland, relative to stills and distilleries.

1816.—The phrase "malt spirits" appears in the Act 56 Geo. III. in the rubric of sec. xi., and covers spirits prepared from "malt, corn, grain, or tilts." This Act, sec. xxvi., also provides for methods of manufacture.

1823.—The Act 4 Geo. IV. c. 94, which changed the system of distillers' duties, and placed the duty on warehoused spirits taken out for home consumption at a rate per proof gallon, speaks of spirits distilled in any part of Scotland or Ireland (sec. 3) "from any wort or wash brewed or made from malt or from corn or grain, malted or unmalted, or any mixture thereof."

APPENDIX I.

HANDED IN BY PROFESSOR STOCKMAN.

I. ACTION OF ALCOHOL ON PULSE-RATE AND BLOOD-PRESSURE.

ABSOLUTE ALCOHOL diluted to sp. gr. 0·906 equals 63 per cent. Alcohol by vol.

Dose: 2 oz. with 2 oz. water—equals 1·2 oz. Alcohol.

	Time.	Pulse-Rate.		Time.	Blood-Pressure.
	4·54	67	.....	4·52	114
	4·59	63	.....	4·58	114
	5·5	65	.....	5·6	114
Alcohol taken - - - - -	5·7	—	.....	—	—
	5·11	61	.....	5·12	114
Sleepy - - - - - -	5·17	65	.....	5·19	114
Heavy - - - - - -	5·25	65	.....	5·27	112
	5·35	65	.....	5·37	114
	5·43	62	.....	5·45	114
	5·53	58	.....	5·54	116
	5·59	60	.....	6·1	114
	6·6	61	.....	6·8	116

II. ACTION OF ALCOHOL ON PULSE-RATE AND BLOOD-PRESSURE.

ABSOLUTE ALCOHOL diluted to sp. gr. 0·906 equals 63 per cent. Alcohol by vol.

Dose: 2 oz. with 2 oz. water—equals 1·2 oz. Alcohol.

	Time.	Pulse-Rate.		Time.	Blood-Pressure.
	4·46	62	.....	4·49	106
	4·53	64	.....	4·55	106
	5·0	62	.....	5·3	106
Alcohol taken - - - - -	5·4	—	.....	—	—
Flushing in ½ minute - - - -	5·8	63	.....	5·10	106
Very drowsy - - - - -	5·14	67	.....	5·17	94
	5·20	65	.....	5·23	100
	5·26	64	.....	5·28	106
Recovering from drowsiness - -	5·32	61	.....	5·34	106
	5·37	60	.....	5·39	106
	5·43	62	.....	5·45	106
	5·53	58	.....	5·56	106
	6·1	59	.....	—	—

III. ACTION OF WHISKEY ON PULSE-RATE AND BLOOD-PRESSURE.

HIGHLAND MALT POT-STILL WHISKEY, 9 years old. Sp. gr. 0·906 equals 63 per cent. Alcohol by vol.

Dose: 2 oz. with 2 oz. water—equals 1·2 oz. Alcohol.

	Time.	Pulse-Rate.		Time.	Blood-Pressure.
	4·27	61	.....	4·25	108
	4·31	60	.....	4·29	108
	4·40	60	.....	4·35	106
Whiskey taken - - - - -	4·41	—	.....	4·41	—
Flushing of face - - - -	4·42	—	.....	4·42	—
	4·44	65	.....	4·46	112
Sleepy - - - - - -	4·50	60	.....	4·48	110
	4·59	60	.....	4·55	110
Very sleepy - - - - -	5·6	61	.....	5·3	108
	5·16	60	.....	5·10	109
Effect wearing off - - - -	5·27	61	.....	5·20	108

IV. ACTION OF WHISKEY ON PULSE-RATE AND BLOOD-PRESSURE.

PATENT-STILL WHISKEY, 3 years old. Sp. gr. 0·906 equals 63 per cent. Alcohol by vol.

Dose: 2 oz. with 2 oz. water—equals 1·2 oz. Alcohol.

	Time.	Pulse-Rate.		Time.	Blood-Pressure.
	4·53	59	.....	4·56	110
	4·59	62	.....	5·1	110
	5·2	61	.....	5·3	106
	5·9	62	.....	5·8	106
Whiskey taken - - - - -	5·10	—	.....	—	—
Flushing at once - - - -	5·14	63	.....	5·15	110
	5·19	61	.....	5·20	108
Yawning - - - - - -	5·25	64	.....	5·27	108
	5·30	62	.....	5·32	106
Sleepy - - - - - -	5·35	61	.....	5·37	108
	5·41	60	.....	5·43	106
	5·46	58	.....	5·48	108
	5·55	55	.....	5·57	109
	6·0	60	.....	6·4	110
	6·6	58	.....	6·9	110

V. Action of Brandy on Pulse-Rate and Blood-Pressure.

Cognac Brandy, 12 years old, guaranteed to contain "the Ethers." Sp. gr. 0·942 equals 46 per cent. Alcohol by vol.

Dose: $2\frac{3}{4}$ oz. with water to 4 oz.—equals 1·2 oz. Alcohol.

	Time.	Pulse-Rate.		Time.	Blood-Pressure.
	4·36	61	.....	4·38	106
	4·43	64	.....	4·44	106
	4·50	62	.....	4·51	106
	4·52	61	.....	4·52	106
Brandy taken - - - - - -	4·53	—	.....	—	—
	4·57	64	.....	4·58	106
Drowsy - - - - - - -	5·3	62	.....	5·5	106
Very drowsy - - - - - -	5·11	65	.....	5·13	104
	5·20	63	.....	5·22	104
	5·34	60	.....	5·35	108
	5·41	60	.....	5·43	106
	5·49	62	.....	5·52	108

VI. Action of Whiskey Distillate on Pulse-Rate and Blood-Pressure.

Distillate at 78°—80° C. of 4 oz. Pot-Still Highland Malt Whiskey, 9 years old. This would contain all the lighter and more volatile substances.

Dose: A quantity of it equal to 1·2 oz. absolute alcohol was taken diluted as before with water.

	Time.	Pulse-Rate.		Time.	Blood-Pressure
	4·50	63	.....	4·52	108
	4·56	63	.....	4·57	108
	5·4	62	.....	5·3	108
Alcohol taken - - - - - -	5·5	—	.....	5·5	—
Flushing slightly - - - - -	5·10	63	.....	5·12	108
Sleepy - - - - - - -	5·16	59	.....	5·18	108
	5·23	60	.....	5·25	104
	5·32	61	.....	5·35	106
Less sleepy - - - - - - -	5·42	62	.....	5·44	106
	5·51	62	.....	5·53	106
All right - - - - - - -	6·1	62	.....	6·3	106
	6·5	60	.....	—	—

VII. Action on Pulse-Rate and Blood-Pressure of Residue left on distilling at 78°—80° C. 4 oz. Pot-Still Highland Malt Whiskey, 9 years old, until 2 oz. had passed over.

Dose: The remaining 2 oz. was taken.

	Time.	Pulse-Rate.		Time.	Blood-Pressure
	4·40	64	.....	—	—
	4·48	68	.....	4·50	108
	4·52	63	.....	4·54	108
	4·57	64	.....	4·58	106
Dose taken - - - - - - -	4·59	—	.....	4·59	—
	5·4	61	.....	5·5	108
	5·10	62	.....	5·13	108
	5·19	66	.....	5·17	110
	5·25	60	.....	5·27	108
	5·31	62	.....	5·33	108
	5·40	61	.....	5·42	108
	5·47	62	.....	5·45	108

There was no drowsiness and no apparent action on the nervous system. Slight irritation of stomach. Sp. gr. of residue was ·980 ; it was acid in reaction and turbid.

VIII. Action on Pulse-Rate and Blood-Pressure of Residue left on distilling 4 oz. Cognac Brandy until 2 oz. had passed over.

Dose: The remaining 2 oz. was taken.

	Time.	Pulse-Rate.		Time.	Blood-Pressure
	4·38	57	.....	—	—
	4·45	60	.....	4·41	110
	4·56	60	.....	4·48	108
Dose taken - - - - - - -	4·57	—	.....	4·55	108
	5·5	58	.....	5·7	112
	5·13	58	.....	5·11	112
	5·23	60	.....	5·21	108
	5·31	59	.....	5·34	110
	5·41	57	.....	5·42	110
	5·53	58	.....	5·51	112
	5·56	57	.....	5·58	112

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TAKEN BEFORE

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TWENTY-THIRD DAY,

Monday, 6th July, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

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G. S. BUCHANAN, Esq., M.D.
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A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. JOHN HERON, called.

Mr. J. Heron

6 July 1908.

12392. (*Dr. Horace T. Brown.*) You are, I believe, a Fellow of the Chemical Society and a Fellow of the Institute of Chemistry?—I am.

12393. You are also a Past President of the Institute of Brewing?—I am.

12394. You are, I believe, in practice as an analytical and consulting chemist?—I am.

12395. In the course of your work have you had something to do with analyses of rums?—Yes, I have made a good many analyses of rums.

12396. Can you tell us anything with regard to the secondary products of Jamaica rum as compared with those of Demerara rum?—The secondary products of Jamaica rum are very much larger in quantity than in Demerara rum. I have made very little analysis of Demerara rum, but the analyses I have made practically conform to a silent spirit.

12397. Is there something also connected with the acidity of Jamaica rum which rather differentiates it from other rum?—Yes, it has a very high acidity.

12398. You have given in your *précis* certain maximum and minimum values for the acids, aldehydes, furfurals, and esters of rum. Would you kindly tell us what they are?—I have made analyses of what I knew to be absolutely pure Jamaica rums. I have got those analyses here. They varied from something like 900 to a little over 200 of esters.

12399. That is from 900 to 200 of the esters and ethers?—Of esters as ethyl acetates I find nothing less than 200. The limits are from 900 to 212.

12400. How do the acids run?—From 288, roughly 290, to 65.

12401. And the aldehydes?—From 109 to 19, and the furfurals from 14 to 1·5. What I laid particular stress upon was the amount of the esters. In fact, I went so far as to lay down a test for pure Jamaica rum, that a sample of pure Jamaica rum should contain 200 or more parts to the 100,000 of esters.

12402. Would you be able to differentiate, making use of those values, a Jamaica rum from one which was not from Jamaica, or rather would you be able to state that a certain rum could not have been made in Jamaica because the esters were low?—I could faithfully say that, in those rums where the esters are low.

12403. Then you think it is possible to fix an analytical standard which would be of some use in determining whether Jamaica rum is genuine or not?—I think it is quite possible. In fact, I made an analysis of some rums which I found to be not pure Jamaica rum, and which the parties to the prosecution confessed had been adulterated.

12404. You know, I suppose, that the people in Jamaica have considered this question of an analytical standard, and have not thought fit to adopt it?—I was not aware of that fact.

12405. Do you know a paper by Mr. H. H. Cousins on the production of rum in Jamaica which appeared in the "West Indian Bulletin" for 1907?—Yes.

12406. I will just read what he says with regard to an analytical standard, because it seems to me not to coincide quite with your opinion. He says, on page 122: "It was at one time considered that an analytical standard of ethers could be fixed whereby a genuine Jamaica rum could be differentiated from a patent still colonial rum or a blended Jamaica rum. While, however, the best types of 'home trade rums' contain 300 to 500 parts of ethers, and the great bulk of the rum exported from Jamaica is well above a standard of 200 parts of ethers, there are certain

Mr. J. Heron

6 July 1908.

marks of rum (and among them some of stout body and attractive quality) which are as low as 100 parts of ethers. Except in cases of gross adulteration, therefore, purely analytical evidence is not of much avail in deciding whether a rum be a genuine Jamaica rum or not. A proposal to prohibit the exportation of any rums below a standard of 200 parts of ethers was seriously considered by the planters last year, but was thought to be unfair to individual estates, and eventually was abandoned." That is an opinion, of course, coming from the Government of Jamaica's analytical and agricultural chemist, and you will see he distinctly regards it as impossible, or, at any rate, inadvisable, to establish anything like analytical standards as regards the esters?—Some of the Jamaica rums, but very few indeed, contain less than 200 parts of ethers. They are not pure rums in the strict sense of the word.

12407. But Mr. Cousins says here that very few of them apparently had come below that standard of 200, which is practically the same as yours, but there are some genuine Jamaica rums which do?—I have never come across them.

12408. Do you know anything about the still in which the Jamaica rums are manufactured?—From what I gather it is very like the Irish pot still, heated by open fire.

12409. Do you make a great point of the fire heat in that case?—I believe that has a great deal to do with the bye-products.

12410. You say that "the fire heat gives to the spirit a distinctive character which is readily recognised in products of the pot still, but which is altogether absent in spirit derived from the patent still." Of course, there are two points there, the question of the open fire and the particular way in which the steam heat is applied. You would regard Jamaica rum as made in a pot still with an open fire?—I would.

12411. You would not admit any possibility of steam heating?—I would not.

12412. But of course that steam heating is largely used in Jamaica apparently for the pot still?—Yes.

12413. In this same paper of Mr. Cousins which I have already referred to he says this: "I am convinced from the results obtained at Shrewsbury estate in Westmoreland, that all home trade rums could with advantage be distilled in stills heated by a steam coil. Burnt rum should then be unknown. The fetish of the 'direct fire' that still lingers in the minds of Scotch whiskey distillers has no basis at all where Jamaica rum is concerned, since any excessive firing results in a most serious injury to the spirit produced." I think that opinion is opposed to yours?—It is.

12414. Of course this is written by a man on the spot who is studying the processes?—But you have to take into account the flavour derived from the sugar-canes as well as other things.

12415. That is another matter, but we are simply speaking now of the method of distillation. You have not had much experience in still work—either pot still or patent still?—No, I have not.

12416. But you have seen pot distillation going on in the south of Ireland?—I have. It is practically the same as is carried on in Jamaica.

12417. You state in your *précis* that in your opinion the patent still destroys the esters through the large quantity of steam which must of necessity be always present in the patent still. May I ask have you any experimental data to guide you there?—I have made a lot of experiments with the different models of pot stills in my laboratory, and I found there that the spirit was very inferior to the spirit I started originally with.

12418. I was going to ask you whether you had taken portions of the same wash and distilled that with the ordinary fire heat in the laboratory, and taken another sample and distilled that by what is ordinarily called steam distillation. Have you determined the amount of esters in those two distillates and found that the one was higher than the other?—I cannot say that I have done so. I simply made a lot of experiments with the patent stills to test their value, and so on, but I have not made any comparative experiments.

12419. But in the patent still you have a great deal of separation going on as well as destruction. The question in my mind is whether in the ordinary process of steam distillation the esters are very largely saponified?—I believe they are.

12420. But you have no direct proof of it?—I have no direct proof of it.

12421. You regard the flavour and odour of Jamaica rum as due principally to the secondary products?—I do.

12422. But to some extent also to the volatile product of the sugar-cane?—Quite so.

12423. Do you know anything about the nature of those volatile products of the sugar-cane?—I cannot say that I do practically, but the sugar extracted from the sugar-cane is very different to ordinary purified sugar.

12424. But if you take the ordinary raw sugar and steam distil it, is there anything which comes over in the distillate?—There are volatile products which give the peculiar flavour to the raw sugar.

12425. You have had a good deal to do with sugar manufacture at various times, have you not?—I have had a good deal to do with sugars.

12426. I was not quite clear from the latter part of your *précis* whether you thought an analytical standard could be set up, but you have told us that you believe it is possible to set up a minimum standard?—Yes, I do.

12427. Then you do not agree with Mr. Cousins in what he says?—No, certainly not.

12428. (*Dr. G. S. Buchanan.*) With reference to the last two questions of Dr. Brown, may I ask in what sense you use the word "standard?" Are you thinking of a limit to which all rums must conform, or are you thinking of a limit which is useful for what I may call detective purposes as an indication?—I rely principally on the amount of ethers present in rum. If the amount of ethers is below 200 then I should have a strong suspicion that it had been diluted with silent spirit.

12429. Would you simply regard the transgression of your 200 limit as raising a suspicion, or would you condemn that rum straight off if it was called Jamaica rum and had over 200 of esters?—I should look at the general analysis of the rum. For instance, the acids and the aldehydes and the furfurals as well as the ethers, and looking at them generally I would then see how it conformed with the analysis of a real pure rum.

12430. Would you, in addition, in forming an opinion on analyses as to whether a rum was a Jamaica rum or not, rely on tasting and the evidence of the senses?—Tasting and smelling to a large extent.

12431. Do I understand that some of these analyses that you have made have been in connection with the attempts that have been made to put in force the Merchandise Marks Act with regard to Jamaica rum?—That is so.

12432. Under the Merchandise Marks Act would it be the chemical evidence alone that would be brought up, or would it be, in addition, trade evidence as regards the taste and character of the samples?—I may say that several of the samples of rum that I have analysed have been tasted by experts, by merchants in rum, who have said that they are not pure Jamaica rum independent altogether of my analysis. My analysis confirmed their opinion. For instance, I have an analysis here in which the ethers are 59, the aldehydes 5, the furfurals 1·46 and the acids 152. But the ethers, which is the principal point I rely upon, are as low as 59·6.

12433. So in those cases there has been the double evidence—the chemical evidence and the evidence of the tasters?—Quite so. In this particular case the taster said, apart from my analysis altogether (and I did not know it at the time), that it was not in his opinion Jamaica rum, and my analysis confirmed his opinion or he confirmed my analysis. Afterwards the man who was prosecuted on that occasion confessed that it was not genuine Jamaica rum.

12434. So that the limit of the 200 has justified itself in your experience by its results?—I think it has fully justified itself.

12435. On the other hand you can readily conceive that if a fixed limit of 200 esters was made absolute, and that was the sole test, it would at once be open to various forms of abuse and adulteration?—I am fully aware of that. I would not set up that as the sole limit.

12436. That is what I wanted to bring out?—I should look at the acids and the aldehydes and the furfurals as well, and then taste and smell in addition. I have here a number of analyses.

12437. I think it would be useful to the Commission if you would give them some indication of the number of samples of rum that you have had on which these maxima and minima you have given us are based?—I really could not give you that straight off, but I should say I have analysed some hundreds of samples, and I may say that amongst samples I have analysed, which were bought generally from licensed premises, some 5 to 10 per cent. were genuine samples, and the others were all adulterated.

12438. Is that the result of the application of your 200 limit, or do you actually know what those samples were? First, were they sold as Jamaica rum?—They were sold as pure Jamaica rum.

12439. Then you analysed them and found them below the 200 in the matter of esters and also possibly in other analytical respects, and you have put them down as adulterated?—I have.

12440. Has there been any check on that in any way so that you actually knew whether they were adulterated or not?—In some cases the parties confessed that they were adulterated.

12441. Would it be possible for you to give us, not merely just these few sets of figures of the maxima and minima, but a tabular statement, under letters if you please, showing what the actual figures are for the whole series?—I could do that perfectly well, but I have not got them here at the present moment.

12442. Will you put that in later on?—I will with pleasure. (*See Appendix J.*)

12443. It would be important in connection with any statement of that sort to give us what information you can with regard to the samples, especially as to any samples the origin of which you know?—I could give you that with pleasure in confidence, of course.

12444. Could you give them without giving names? —I can give the house that the rum was purchased at and all that.

12445. (*Dr. Horace T. Brown.*) Can you give them under letters or numbers?—Yes, I will give them under letters or numbers.

12446. (*Dr. G. S. Buchanan.*) One point with regard to Mr. Cousins' article which you were asked about. I did not gather whether he, in objecting to fire heat, is meaning fire heat as against steam coils or fire heat as against live steam?—Steam coils.

12447. So that would not affect the destruction of the esters that you spoke about? You are not supposing that will take place with the steam coils?—It all depends on how the steam coil is used. If it is used simply for the purpose of distillation causing the liquid to boil I do not see that it could do much destruction in that respect, but still there is something that is given off by fire which is different to steam heat.

12448. Have you gathered what is the silent spirit which these samples which were not genuine Jamaica rum contained?—It would be very difficult indeed to determine what kind of spirit had been used in the adulteration.

12449. It did not as a matter of fact come out in the evidence in any case with which you were associated? —It did not.

12450. Have you had any experience of trying to identify the same rum of the same distillery, I mean having standard samples that you know to be the genuine product or the product from some one particular rum distillery, and endeavouring to trace that analytically?—No, I cannot say that I have had experience of that.

12451. (*Mr. Guillemard.*) I did not quite understand whether you had actually arrived in your own mind at a standard for rum that you would be prepared to lay down—a maximum and a minimum?—I have made several analyses of what I know to be perfectly pure rum, and I have those analyses here.

12452. You have stated that you examined some hundreds of samples?—All kinds of rums.

12453. The result of that examination according to you was that you only found five per cent. of the samples genuine?—That is so.

12454. What I wanted to understand was, was the standard by which you tested them arrived at by the examination of those several hundred samples?—No.

12455. It is one you had arrived at before?—I had, first of all, before I could lay down a standard, examined samples of genuine rum obtained from Jamaica.

12456. And it was from that you formed your standard?—It was from that I formed my standard.

12457. (*Dr. G. S. Buchanan.*) You will make that clear in the analyses that you are going to put in?—Yes.

12458. (*Chairman.*) What is your standard of genuine rum?—It is derived from my analysis of the genuine rum.

12459. But what is genuine rum? Just give us the analysis. How does it work out?

12460. (*Mr. Guillemard.*) May I take it that this is your standard: that anything may be taken as Jamaica rum which conforms with the following description—may I take it that this is the analysis that you wish to lay down for Jamaica rum under the heading of "Maximum and Minimum"?

	Maximum.	Minimum.
Acids, as acetic acid - -	288·8	65·8
Aldehydes, as ethyl aldehyde	109·6	19·2
Furfural - - - -	14·6	1·5
Esters as ethyl acetate - -	859·6	212·4

These are the figures I have found from my analyses of the genuine rums.

12461. Anything that comes between those maxima and minima is genuine rum?—It is.

12462. Does that allow a very large margin? The maximum and the minimum seem to me, not being an expert, very wide apart. Are they very wide apart? Does it allow for great differences of quality?—They are not so very wide apart.

12463. Is it a tight definition or a loose definition? Would it let in a good deal or keep out a good deal?—The minimum is 212·4 of esters.

12464. And the maximum is 859·6?—Yes.

12465. Does not that mean a great and recognisable variation?—There is a great variation.

12466. In other words, you intend your standard for rum to be a very generous one?—I do, certainly.

12467. The point I wanted to get at (I think we have arrived at it now) was this, that it is quite clear that your standard by which you judge your rums is not arrived at by the examination of those samples in which only 5 per cent. turned out to be genuine?—No, certainly not.

12468. (*Chairman.*) I should like to be quite sure about this because I do not understand it at the moment. Will you give us some direct definition of what you say is genuine rum? Is that the definition which you have given to Mr. Guillemard?—Yes.

12469. In these analyses that you have taken you have told us there was a variation. What was the result of the variation? Would the rum become injurious to health, do you think?—Which do you refer to, my Lord?

12470. Any one. You have examined, you say, a great many samples?—I have.

12471. And they were not genuine?—That is so.

12472. What was the result of this want of genuineness? Did it produce injury to health to the person consuming the rum?—It is not as good medicinally.

12473. Is it injurious to health?—I cannot say that it is injurious to health.

12474. When it is not quite so good is there any effect you can mention of the worse samples of rum compared with the better?—It has not the stimulating properties for one thing, or the reviving properties or the vivifying properties.

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12475. You say it has not the stimulating properties. What is the injury produced by not having the stimulating quality? Would the bad quality of rum produce drunkenness sooner than the good or not?—I really could not say.

12476. Is there an evil you want to have remedied?—The evil is that a lot of rum is on the market described as pure Jamaica rum which is not Jamaica rum at all.

12477. That is a very fair answer. Are these bad qualities of rum, do you think, manufactured in the United Kingdom or in Jamaica?—Good qualities have simply been diluted by the addition of silent spirit.

12478. Are these bad qualities manufactured in the United Kingdom or in Jamaica?—I should say they are manufactured in the United Kingdom.

12479. And represented as Jamaica rum?—Yes.

12480. That is a false description?—Yes.

12481. And that is prosecutable here as the law now stands?—That is quite so.

12482. Do you think that is carried on to any great extent?—I certainly do.

12483. I suppose you would not apply that statement to all the specimens you analysed, but only to those that were the worst specimens?—Anything that showed less than 200 parts per 100,000 of esters, and which were low in aldehydes and furfurals, and which had not the smell or the aroma of Jamaica rum I should condemn as being impure.

12484. That is not quite my question. Of course, there is a great amount of variation, and some are far away from your standard, and others close to it, I suppose?—That is so.

12485. Would the answer that you have given as to its being injurious apply to all the specimens that you analysed below your standard or only to those that were greatly below it?—Those that were greatly below it. In all cases the samples that I analysed were much below the standard, and, of course, I condemned them.

12486. Do you think that all that you analysed would be prosecutable as not representing the real article, Jamaica rum?—Most of them.

12487. (*Dr. Bradford.*) With reference to the Chairman's questions, have you any evidence that the addition of silent spirit to Jamaica rum is injurious to the public health?—I have no evidence that it is injurious, but simply it is diluting the genuine article.

12488. You would attribute any beneficial action which is attributed to rum to the high percentage of esters in the genuine article?—I would.

12489. That is your point, is it not?—That is my point.

12490. (*Dr. G. S. Buchanan.*) Can you tell us with regard to some of these samples that have been below your figure of 200 what the esters have been approximately? How low have they been down?—In one case 57·6, in another case 50·1, and in another case 59·5. These are just a few instances.

12491. (*Dr. Horace T. Brown.*) The maximum standard you put as 860 practically?—Yes.

12492. You have never seen anything over that?—No, I have not. That is the highest.

12493. Are you aware that many of the Jamaica rums of the finer quality contain far away more esters than that?—I believe there is a rum made by a patent still process in which the ethers were very high indeed It was designed to increase the ethers considerably.

12494. Let me once more quote this paper of Mr. Cousins. He says: "The finer qualities contain 1,000 to 1,200 parts of ethers, and occasionally samples may even attain a standard of 1,500 or 1,600." There is an enormous range?—I believe those analyses were made on rum that was what I may call faked up—made purposely to increase those ethers.

12495. There is no indication of that in the paper?—But that is my belief.

(*Chairman.*) The Commissioners are much obliged to you for the evidence you have given.

The witness withdrew.

Mr. J. C. Nolan.

Mr. James Coneys Nolan, called.

12496. (*Chairman.*) You are, I believe, the representative of the Jamaica Government as Special Commissioner in the United Kingdom?—I am, my lord.

12497. I believe the *précis* that you have given us contains a good deal of matter which is outside our reference. We must keep to those things that are within our reference?—Very well, my lord.

12498. When did you come to the United Kingdom?—In March, 1905.

12499. Will you tell the Commission what were the duties allotted to you?—I was appointed under a special law passed by the Legislative Council of Jamaica in 1904. It is called "The Jamaica Rum Protection Law 26 of 1904." That law authorised the Government of Jamaica to appoint a properly qualified person to come to the United Kingdom to try and put down the frauds which had been committed on Jamaica rum in this country and abroad.

12500. In pursuance of that nomination you came here in March, 1905?—Yes.

12501. Will you just refer to the law of 1904, which you had to carry into effect if you could?—"It shall be lawful for the Governor to appoint a properly qualified person to institute proceedings and undertake the prosecution in the United Kingdom of Great Britain and Ireland and elsewhere, of offences under the provisions of the Acts of the Imperial Parliament entitled the Merchandise Marks Acts, 1887 and 1891 (50 and 51 Victoria, chap. 28, and 54 Victoria, chap. 15), so far as such Acts now apply, or may hereafter be made to apply to Jamaica rum, and to take all other necessary and proper steps and proceedings for protecting Jamaica rums from imitations and frauds of all kinds."

12502. What was the reason, so far as you know, for that Act being passed? Had frauds been committed that were known to your legislative body in Jamaica?—Yes, my lord.

12503. Committed in Jamaica?—Not in Jamaica—only here and abroad.

12504. Has that Act been aimed at the false manufacture of rum here which was being represented as Jamaica rum?—There were large quantities of rum which came from Martinique and other Colonies, and those rums are bottled and vatted often in bond here, and taken out of bond and sold as Jamaica rum.

12505. You would not allow other West Indian Colonies to sell rum and call it "Jamaica Rum"?—No, my lord.

12506. Had those frauds had any practical effect which was felt in Jamaica on your sugar industry?—Yes. Very much so.

12507. Just explain that?—For five years ending 1902 42 estates went out of existence. The price of Jamaica rum fell in 25 years from 5s. down to about 1s. 10½d. I had myself 165 puncheons of rum here a few years ago, and I had to sell them for less than they had cost me to produce.

12508. You therefore became, I am quite sure, a zealous administrator of your duties?—I did my best, my lord. I was hard hit myself.

12509. Of course that produced great loss to the Jamaica planters?—It produced a loss to us in one way or another of at least £100,000 a year.

12510. I have some recollection of the West Indies getting a grant of £250,000?—That is so, my lord.

12511. What result did that state of things produce in the West Indies?—The whole of the sugar industry of the West Indies would have collapsed if assistance had not been rendered.

12512. Do most of the West Indian Colonies produce rum?—Yes.

12513. Did the other colonies suffer as well as Jamaica?—Yes, but not so much. Demerara adopted a cheaper method of making rum than we did. We stuck to the old pot still, but they had better machinery for making sugar, and much rum from third molasses by a cheaper method.

12514. When you therefore came to perform this duty I presume you did take some steps here?—Yes.

12515. There were two prosecutions?—We had the two first as test cases. The Board of Trade assisted me very materially in the first six months in every possible way they could, and pointed out what evidence I should get and what analyses I should have made, and also the Colonial Office instructed the Inland Revenue and the Customs to afford me every information or assistance they could to put down these frauds.

12516. What is your relative position as regards the authorities? You were sent over here by the Island Government and you received your emoluments from them. How far were you under the control of the Home Government here?—It was first proposed that I should be put under the Colonial Office, and then it was proposed I should be put under the Board of Trade, but lastly it was decided that I should be responsible direct to the Government of Jamaica, that I should report all circumstances connected with my mission to the Colonial Office, and be guided by directions therefrom.

12517. The defendants in your prosecutions, I believe, paid the costs, but if expenses were incurred in the prosecutions against those offenders, those would be borne by the Island Government partly and partly by the planters?—The planters paid 10d. a puncheon on every puncheon of rum shipped from the island, and the Island Government paid £250 towards my expenses.

12518. You gave me an answer just now which partly answered my question, but I should like to pursue it a little further. Where was it these frauds were committed, and in the first place what is the nature of them? Is it adulteration?—These frauds have been committed largely under the authority of the Customs House—not the Customs House so much as the Inland Revenue Department. They allowed traders to mix in bond if they wished and would not prevent them using the words "Jamaica rum" if they so desired.

12519. That is not my question. Where is it, and, in the first place, what is it that is done that has made the matter that you complain of as being inferior or false? Where is that done? Is it in the manufacture in other Colonies in the West Indies?—They blend patent still spirit with Jamaica rum in the United Kingdom. Patent still spirit can be bought for about 1s. a gallon. It is much cheaper than Jamaica rum, and it is blended and sold and put on the market in this country as Jamaica rum.

12520. In Jamaica you use the pot still?—Yes, the pot still alone.

12521. Do you not have in Jamaica retorts?—Yes.

12522. Of a rectifying nature?—No.

12523. What retorts are they?—I have an old photograph here which will show you the still that we use (*producing photograph*). The retort is filled with high wines, and the fire is put under the still.

12524. What about the rectifier?—There is no rectifier.

12525. Are rectifiers used?—No.

12526. Never?—Never.

12527. (*Dr. Horace T. Brown.*) Are they used independently of each other?—No, the distillation goes on at the same time. The direct fire is underneath the still, and the vapour spirit from the still passes through the goose neck into the retort, which is about one-tenth of the size of the still and which contains the high wines, and passes from them into the worm and comes out at the end of the worm as rum.

12528. (*Chairman.*) Do you know what is used in the other islands besides Jamaica?—I only know from reading.

12529. For instance, in Trinidad, do you know what they use?—The patent still, the Coffey still.

12530. But in the different islands, or in the majority of them, they are pot stills that are used?—Some of them put up central factories and they have rectifying plants of one kind or other.

12531. Is it your opinion that all patent still rum ought to be objected to and refused as Jamaica rum?—Yes, my lord. It could not be sold as Jamaica rum.

12532. Your view is that patent still rum should not be allowed to be rum at all?—Certainly, I think so.

12533. Even in blending?—No.

12534. You are a staunch supporter of pot still manufacture only?—I am.

12535. You cannot have Jamaica rum made in any other way?—No, my lord.

12536. Have you ever tried the patent still in Jamaica?—No, my lord, we do not want to. It would ruin our industry.

12537. I have heard of condemnation without a hearing?—I would not try it myself for a good deal, and if I found a man selling Jamaica rum in this country made in a patent still in Jamaica I would prosecute him for it. It would not be Jamaica rum.

12538. You would prosecute him, but I cannot tell you at present whether you would convict him?—I have convicted a lot.

12539. That is your view?—Yes, I believe in Jamaica rum being made in the pot still.

12540. What do you say is the product of the patent still?—Silent spirit, I believe. It destroys all the esters and the valuable properties in the rum.

12541. Is the difference perfectly recognisable by the ordinary consumer?—I think so.

12542. The difference between the patent still and the pot still?—Easily.

12543. And of course consumers can order what they like?—Certainly, whatever the consumer wishes to have. What I fight for in the matter is a plain statement of what the liquor is in the bottle; merely a statement as to it being patent still or rum. Let them drink it if they wish, but let it be a fair and straightforward statement on the bottle.

12544. You want a little more. That is a very reasonable answer. You would have the designation of pot and patent still, but would you allow a patent still rum to be called a Jamaica patent still rum?—No.

12545. You have your first great condemnation. You would not call it rum at all?—No. It costs a lot more to make rum in a pot still than in a patent still.

12546. If you will not call it rum or Jamaica rum I cannot quite see what you want to have the patent still and the pot still declaration for?—We do not propose to have any patent still in the Island.

12547. Or to allow it to be sold in the United Kingdom?—Or to allow it to be sold in the United Kingdom. Our rums of course are much more expensive, and we get much larger prices for them.

12548. Is there anything like illicit patent still rum manufactured in Jamaica?—No. There may be a little larceny of rum from distillers during crop time; nothing else.

12549. Is there any brought in from the other islands and blended?—No, my lord, it could not be done. There is a Customs duty of 16s. per gallon on all spirits coming into the Island, and we only pay 5s. for the Inland Revenue duty, so they could not bring it in.

12550. That 16s. import duty would apply to the inferior as well as the superior rum?—It would apply to any spirits.

12551. That is prohibitive?—That is prohibitive.

12552. I think it would be well to have from you the process that is used in making this pot still rum. Perhaps we can abbreviate it a little. You say in your *précis*: "Jamaica rum is made from sugar-cane in the old pot still. The sugar-canes, when ripe, are cut and carted into the works (the canes ripen in from 12 to 15 months). They are passed through a strong steel or iron three or five roll-mill worked by steam. The juice of cane liquor falls through the rolls on to a receptacle directly under the mill, which

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is called the mill-bed. The liquor is carried from the mill-bed by gravitation to another receptacle which is called the well. From this well it is pumped to large iron vessels called syphons or clarifiers, which contain from six to seven hundred gallons. In the bottom of the syphons there are copper steam coils or tubes, which are filled with steam when the syphon is full. The liquor is thus heated to a few degrees below boiling point. By this means all the scum comes to the top, and the rest of the liquor in the syphon is partially clarified. The clarified liquor is then gradually drawn off by a cock at the side of the syphon low down, till the scum alone is left. The clarified liquor is either sent to the boiling-house to make sugar or passed through other vessels to clarify to a higher degree, as really the whole process of sugar-boiling is to eliminate foreign matters (which take the form of scum) from the liquor, and then remove the water by evaporation. The scum or dirty liquor which remains in the syphon is then drawn off and sent to the still-house, where it is allowed to remain for a few days till it sours. The syphons are also washed out with water, and such water is sent to the same receptacle in the still-house. In fact, all the washings and scums from vessels in the boiling-house are sent to this receptacle. There is also put into this receptacle at the beginning of crop a certain amount of megass which assists to sour the liquor. Megass is the fibrous part of the cane which remains after crushing the juice from the cane in the mill. In the meantime the clarified liquor in the boiling-house is made into sugar and allowed to cool. It is then passed through centrifugals or purgers which separate the molasses from the dry sugar on something of the same principle as a milk separator. The molasses are then rich, and at this point are sent to the still-house. In nearly all other countries where rum is not of the same commercial or medicinal value as in Jamaica the molasses are boiled and purged a second and third time to make what is known commercially as first, second, and third sugars. The molasses thus sent to the still-house is as useless an ingredient to produce genuine rum as fermented sawdust. The only other ingredient used in the manufacture of Jamaica rum is dunder. This is a substance which remains at the bottom of the pot still after all the spirits and a great quantity of the water have been evaporated by distillation from the wash. It is removed from the still and allowed to cool for a few days. It comes from the still something like the colour and consistency of pea soup. There are three ingredients with water used in the setting up of the wash for fermentation, all of which are the produce of sugar cane, viz.: scum or skimmings, molasses, and dunder. They are used in proportions according to the judgment and practical experience of the distiller, who is guided by all circumstances connected with the estate and distillery. The fermentation is from six to twelve days, in some cases longer. After the fermentation subsides the wash is pumped into a pot still, which is the oldest form of distillation, and is now held by the highest authorities on the subject to be the only one capable of distilling a characteristic spirit whether whiskey, brandy, or rum. The planters of Jamaica attribute four causes to the great and known superiority of their rum:—First, soil and water; second, rich molasses; third, the manner in which the wash is set up for fermentation and the preparation of the ingredients used; fourth, the use of the old pot still and retort. Jamaica has at all times used the pot still. There is no other used in the Island." I think that is all as to the process. You do attribute great influence to the soil of Jamaica?—Yes, we attribute great importance to our soil, the same as some other lands are famous for producing high-class brandies and wines.

12553. You have mentioned you had two prosecutions. Will you just generally tell us what it was that the persons prosecuted had been selling?—They sold Demerara rum mixed with Jamaica rum.

12554. That is specific?—Yes, they pleaded guilty.

12555. Did you go into the question of quality at all, or only the fact that it came from Demerara?—Only the fact. We went on the question of origin.

12556. That was admitted, and the defendants pleaded guilty?—Yes. First of all they wanted to fight, and then they pleaded guilty.

12557. With regard to what takes place between the Customs and the Inland Revenue, I will leave Mr. Guillemard to ask you questions upon that. How many prosecutions have you had since you arrived here?—I had two in London first, and then I had one in London against a large firm here. Then I had one in the South of Ireland and one in Newcastle. There were some prosecutions that took place in Aberdeen under the Food and Drugs laws, and I gave all the information to the different local health authorities who were prosecuting. The defendants in those cases pleaded guilty also.

12558. In all these cases were they all misrepresentations as to the place where the rum came from?—Yes.

12559. That was so in all those cases?—Yes.

12560. Jamaica against the world?—Yes.

12561. And Jamaica succeeded apparently?—We went entirely on the question of origin. Of course, the analysis helped us a great deal.

12562. Have your efforts had a good effect on Jamaica?—They have had the effect of giving the planters about £50,000 a year more than they had before. They are getting now for their rums an increase of 33 per cent. in the price.

12563. Better than it was?—Better than it was, so that the Government hold that my mission has been justified.

12564. When it was at this low price, did it go down in price here to the English consumer?—I do not think so. The trade charged the same price. There are a lot of middle men between the planters and the trade, and, of course they all have their whack out of it.

12565. Now you have restored the price?—Fairly. We get 3s. to 3s. 6d. for common clean drinking rum, but it was up to 5s. Of course, there are other high-class rums. There is what they call German rum, and that all goes to Germany for flavouring purposes and for blending, but it is not a self rum. You would not drink it.

12566. Do you suggest that there should be any alteration in our laws here to protect Jamaica?—They have altered the Customs regulations for us.

12567. I will ask Mr. Guillemard to deal with that, because he knows all about it and I do not.

12568. (*Mr. Guillemard.*) I think there is a good deal in your *précis* that refers to troubles that you have had in the past. You have had trouble with the Government generally. They would not take off the taxes on rum which you wanted them to take off, and then you had some trouble with the Colonial Office?—No; no trouble with the Colonial Office. They assisted us.

12569. On page 2 of your *précis* you say: "The Government at the time refused to give any support to the proposed law." Is that the Colonial Government?—Yes, that was the Colonial Government—the Home Government, ten years ago.

12570. You have had some trouble with the Home Government as a whole, and with the Colonial Office when they would not support that view?—No. At first Mr. Chamberlain would not support it.

12571. That, at the time, you did not like, and you resisted it?—We did not like it. The Government objected entirely to the export tax which we were willing to pay.

12572. But in the past you have had difficulties with the Home Government, with the Colonial Office, with the Customs, and with the Excise, and, of course, you have been trying to get all you could out of them?—I would not go so far as that. We had no trouble with the Colonial Office at any time, because we relieved the Colonial Office of a lot of trouble and expense. There were a lot of planters who were grumbling that their industry had been ruined.

12573. Look at page 2 of your *précis*: "The Government at the time refused to give any support to the proposed law"?—That was in 1897.

12574. That is the Colonial Office?—No; it was the local Government in Jamaica.

12575. Not the Home Government?—No. The local Government in Jamaica is under the direction and control of the Colonial Office entirely.

12576. I do not wish to make too much of it, but at that time the Colonial Office would not do what you

wanted?—It was the Colonial Secretary in Jamaica —Mr. Evans. I could have carried the Legislative Council in Jamaica with me, but I knew he would have had the Bill vetoed over here. He would state that it was not a proper Bill to have passed.

12577. When you say the Government at the time refused, may I take it that you do not mean that the Colonial Office put any difficulty in the way of what you wanted done?—No.

12578. Never?—No, they never made any difficulty except that Mr. Chamberlain thought it ought to be taken up by the planters themselves alone without Government assistance.

12579. Have you had a good many interviews with the Customs and the Excise?—Yes.

12580. It is quite clear from your *précis* that at one time you held that there was a great deal going on which you did not approve of?—Yes, a lot.

12581. Without expressing any opinion on that, I should like to start from the state of things as they are to-day, because that is business. I want to get at what the state of things is and what the Customs and Excise are doing in the direction that you wish, and what more you want them to do. With regard to the general question, you know, of course, the reports in the Annual Colonial Reports. I have here the report on Jamaica. "Colonial Reports—Annual, No. 549. Jamaica. Command Paper 3729." I only want to read this because it is a little less severe on the office which I have the honour to be connected with than the statement in your *précis*?—Things are very much changed now that you are the head of the department. We have every hope that things will be changed very much now.

12582. This is the quotation I want to read to you: "The action of Mr. Nolan"—you see you get a great deal of credit—"together with the assistance to his efforts given by the Imperial departments in the United Kingdom are likely to increase the demand for and stimulate the production of the genuine article." So you see in that report the departments are not painted quite so black now as you painted them in the past?—Yes, that is right.

12583. With regard to the present state of things, I take it that this is the case, that the Customs department—that is my own department—is the one that mainly has to deal with the thing. Is it not the case now that on importation into this country there is a clear distinction drawn between three things: (1) Rum as a general term?—Yes.

12584. (2) Jamaica rum?—Yes.

12585. (3) Imitation rum?—Yes.

12586. Those three are distinguished, are they not, by the Customs on importation?—They are. Of course "Jamaica rum" is lately.

12587. I want to keep the present and the past separate. I want you to make clear to the Commission what at this moment you want done by the departments beyond what they are doing. Those three are distinguished, are they not?—Yes, but they were not enforced.

12588. At this moment?—Yes, I expect they are now.

12589. At this moment they are distinguished, are they not?—I have every reason to believe they are now.

12590. You may take it from me that they have been distinguished since the year 1907, anyhow. Those three are distinguished at present?—Yes, at present.

12591. They are not only distinguished in the documents that have to do with importation, but they are also distinguished in the official documents which are used by the Customs, and by the Excise at a later stage when they go into bond, when they are in bond, and when they get out?—At present they are. The last crop that came in—1908.

12592. In your *précis* you yourself say, "By this means," that is to say, by the steps taken by these two departments: "I am now in a position to trace the rum from the time it is landed until it is entered in the publican's spirit book."—Yes, that is right, so far as the present crop is concerned.

12593. You mean by that that you are able in each case to say whether a thing is described as "Rum," "Imitation Rum," or "Jamaica Rum"?—Yes, now, if the documents are correctly filled up.

12594. Having got so far, would you explain to the Commission what more in connection with the description of rums you want the departments to do? First of all, let us keep to description?—I think if they enforced the regulations that are now in being they will assist us materially to put down the frauds that have been committed.

12595. You are getting a little ahead of me. Have you any reason to think that in the matter of description (because I should be much obliged if you would give me instances) for some time past there has been any evasion of the regulations about the description of those three sorts of rum?—Yes, there has been.

12596. Have you any particulars?—*Here* is a certificate that I will put in. It is marked "Rum from Hamburg." That is an imitation rum, and it is called "Rum." (*Handing in document.*)

12597. The date of this is February, 1905?—Yes.

12598. I am asking for current things?—I expect that is correct now.

12599. In your *précis* you have rather mixed up the past and the present. I am only concerned with the department I am administering at present. I want to know whether, in the matter of description of the various rums, you have any reason to think that the regulations distinguishing them are not observed at present?—I have every hope, as I said a moment ago, that now you are at the head of affairs they will be.

12600. I do not want chaff, I want facts?—I am not chaffing; I am giving you facts. We look forward to that.

12601. I want to know whether, as a matter of fact, you have any reason to think those regulations are not carried out?—I have no direct evidence to give.

12602. Have you any indirect evidence?—No.

12603. I do not want to hurry you into an answer, but I feel quite certain that is the only answer you can give, and I want to get it on the Minutes?—Yes.

12604. Now we come to another stage where you contended that in the past a great deal went on that was not proper; the bonded warehouse and the operations that go on in bond?—Yes, a lot used to go on.

12605. I put it to you that at the present moment, and for some little time past, so far as the consumption at home is concerned, rum and imitation rum are not allowed to be blended in bond. Do you agree to that?—Yes, that is correct.

12606. So that, as far as operations in bond go, nothing is done that renders it possible to pass off imitation rum as rum, and they are not allowed to be blended together for home consumption?—Not now

12607 You have also got a distinction between rum and Jamaica rum?—Yes.

12608. Are you satisfied that neither in the Customs warehouse nor in an Inland Revenue warehouse is a mixture of rum and Jamaica rum marked "Jamaica Rum"?—Not now, since the beginning of the year—any rum landed since the beginning of the year.

12609. I think it is earlier than that?—No; *here* is the correspondence which shows how and when the order was changed. (*Producing document.*)

12610. This is the "Jamaica Gazette"?—Yes. There is the different correspondence that passed between the Colonial Office and the Revenue Departments. It was the Colonial Government that got it done. There was pressure brought to bear on the Customs and Inland Revenue by the Home Government.

12611. Is not this dated 1907?—Yes, but it did not come into operation till the 1st January last.

12612. Is there anything in this about operations in bond?—No.

12613. That is what we are talking about. We have got beyond the stage of description on importation. I am asking questions about operations such as blending that are done in bond. There is nothing about that in this correspondence?—There is in that paper a description of how Jamaica rum got the designation from the Customs and the Inland Revenue.

12614. But I am asking you whether at this present moment a mixture of rum and Jamaica rum that is mixed in bond is allowed to be called pure Jamaica rum?—No.

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12615. You say not since the beginning of the year. I think it was considerably earlier?—That correspondence will show you the date.

12616. No, it deals with quite a different question. Can it be done now?—No, it cannot be done now with this present crop—all rums landed this season.

12617. Now taking the facts which we have got at, the first is that on importation into this country instructions are given to distinguish three things—rum, Jamaica rum, and imitation rum. A second fact which you have agreed to is that you have no reason to think that those instructions are not being carried out. The third fact is that in bond neither under the Customs nor under the Inland Revenue is rum allowed to be mixed with imitation rum for consumption in this country, nor is Jamaica rum allowed to be mixed with any other genuine rum and described as Jamaica rum. All those facts are true now, are they not?—At present.

12618. Although I have had to hold you rather tight I am not in the least wanting to tie you down; I want you now to tell the Commission what more you want in that direction from those two departments. Try and bury your troubles of the past and let us get to business. What more do you want now?—I think it would be well if the Customs and Inland Revenue adopted a system of allowing traders, who wished, to mark their bottles with a stamp, so as to distinguish what spirit it is.

12619. You are talking of rum now?—Yes. The same thing could be very well applied to whiskey.

12620. We had better keep you to rum unless you want to be general. What would you like to put upon the label?—I would put on an official stamp to guarantee that the spirits in that bottle were correct and properly labelled.

12621. Have you not practically got that already?—No, we have not got that now. You will not allow it.

12622. You are interested in Jamaica rum?—Yes.

12623. Do you think that rum in bottle gets out of bond now with the words "Jamaica rum" upon it unless it is Jamaica rum?—No.

12624. What you want is a certificate, "This is Jamaica rum" added to it. Is that all you want?—No, I say if it was bottled in bond. Of course outside bond you cannot help it, but in bond it would be well if you had a stamp the same as the Canadian Government put on their rye whiskey over the top of the bottle.

12625. What is the stamp to say?—That stamp is to be a guarantee that whatever label the trader puts on is genuine and correct.

12626. What do you want the department to do beyond saying whether it is Jamaica rum or not? What do you want the stamp to tell you?—The label would tell you whatever the trader says, but the stamp would be a guarantee that that label was correct.

12627. How much would you want? A man may put a great deal on his label. He may put "Jamaica rum of the very best quality." Then you might get other things?—All Jamaica rum is good.

12628. People put a good many things on labels. Try and look at it a little from the point of view of other people. The Government might be shy of certifying a good many things that are put on labels?—You might put a good deal on anything, but you must take risks in those things in order to get it correct.

12629. Why should Government take this risk?—They guarantee a Bank of England £5 note and take the risk of that.

12630. I do not see the connection between a £5 note and this question?—At the same time it would be quite feasible and easy to put a stamp on all spirits in bond. Of course it would mean more trouble to the department.

12631. I want to know what you want put on the stamp, because at present you appear to be satisfied that if "Jamaica rum" is put on the side of the bottle, it is Jamaica rum?—Not on the bottle.

12632. We are talking of rum in bond?—Yes.

12633. You do not think that rum in bottle gets out of bond with "Jamaica rum" on the label unless it is Jamaica rum?—No. That is so.

12634. What more do you want certified by the Government stamp?—There are many traders who would be glad to pay for it. I would not make it compulsory; I would make it voluntary. The Customs have power to do it. The Customs or Inland Revenue will not allow any official stamp on any spirits going out. They say, "We cannot do it under our official guidance." They will not allow it to be put on in bond.

12635. Does that represent the only advance you want the two departments to make?—That is all.

12636. That is the only thing?—I think so with what we have got already.

12637. May I take it in order to get it quite clear as far as the two Revenue Departments are concerned, that beyond what they are doing at present, all you ask them to do is to allow an official stamp to be put on rums bottled in bond which will be a certificate of their character, or do you want anything more done?—No, I do not think I want anything more.

12638. You would be content with that?—I do not think I should want much more from the departments.

12639. Then I can leave that part of the question, but there are one or two other smaller points I would like to ask you about. You end your *précis* by saying, "I would recommend the following," and then your first recommendation is, "That only pot still spirits be allowed to be sold as rum." There is a report which I have no doubt you know by heart, made by Mr. Steele, on the Excise restrictions in force in the West Indies and British Guiana?—Yes.

12640. The reference to the report is "Command paper 1681." Mr. Steele has this account: "The stills used in the manufacture of rum in the West Indian Colonies are: Jamaica, pot still with retorts attached?"—We do not agree with Mr. Steele's report, nor do I know any part of the West Indies that does.

12641. I will get it on the Notes first, and then you can make your comments afterwards: "Jamaica, pot stills with retorts attached; Dominica, ditto, ditto; Antigua, ditto, ditto; St. Vincent, ditto, ditto; St. Kitts-Nevis, ditto, ditto; Barbados, ditto, ditto; and one distillery with a rectifying still producing spirits at 70 degrees over proof?"—Yes, that is correct.

12642 "Trinidad, Coffey's apparatus or another kind of still constructed on the same principle; Grenada, pot stills and rectifying stills of the nature of Coffey's still; St. Lucia, pot stills with rectifier attached; British Guiana, pot stills and Coffey's or other rectifying stills?"—Vat stills we call them.

12643. I do not ask you to accept everything Mr. Steele says, because I see you disagree with some of it, but you will agree to this, that a great deal of the West Indian rum is not made in the pot stills?—Oh! yes, a lot.

12644. You would definitely wish to exclude the whole of that from the name "rum?"—No, I would not ask to do that. I put it so in my *précis* that I do not consider it myself, as the man in the street, rum, but I am not here to do an injustice to other Colonies. I am here to protect Jamaica rum only.

12645. But you say that only pot still spirits should be allowed to be sold as rum?—Yes.

12646. Then it follows from your statement that you would object to the selling as rum of the rum made in Barbados, Trinidad, and British Guiana?—You could not call some of the spirits made in Barbados rum at all. It is used to mix with whiskey and brandy and rum.

12647. Would you rule out Trinidad, too?—They only make rum there when they can get a very high price for it. They often throw the molasses away.

12648. Grenada?—Yes, that is a little better. There are pot stills in some of the islands.

12649. Anything that is produced otherwise than from the pot still in those islands you would rule out?—Personally, I would. I only give you my opinion personally.

12650. But you come here, as you state in the beginning of your *précis*, as the representative of the Jamaica Government which is a very responsible position?—Yes.

12651. Do you in that capacity, not as Mr. James Nolan, but as the representative of the Jamaica Government, ask the Home Government to take that step with regard to the product of all those islands? You are perfectly within your rights, if you like to do it; but do you do it?—I certainly think myself that any rums not made in a pot still are not entitled to the designation of "rum." If the rum is made in a patent still it is rectified spirit, not rum.

12652. And in your capacity as Commissioner you press that view?—That is my opinion, and I press it.

12653. You anticipate a certain amount of opposition from the other colonies?—I have had opposition all along. In all the pleadings in every single case we held that the product of the patent still was not rum; but, of course, I only fought for the country of origin, as far as I was concerned myself.

12654. As a matter of machinery, how would you actually ensure that the spirit had been made wholly in pot stills? Would that be possible on the other side?—Oh yes, they do it in France. They have different bills of lading and different permits, which come out of the country differently coloured.

12655. You know your West Indies very well, like the palm of your hand?—Yes.

12656. Could you give us an indication of the machinery by which that would be done? What would they do?—Of course, the Customs authorities in each of the different islands at once know where the rum comes from. Every estate has a separate mark, and the rums are shipped under that mark, and they know the product of the different estates, whether it is pot still or patent still.

12657. Are there no places where there are both stills working together?—That I cannot tell you.

12658. Is not that rather a vital point?—Yes, it would be, but I do not think there are any.

12659. Would not difficulties arise there?—I do not think so. They could say whether it was made in a pot still or a patent still.

12660. How could the Customs officers say it?—The Excise officers in different colonies inspect the working and the marks in the spirit book every week, and they see the whole thing.

12661. I am trying to get the advantage of your local knowledge. There would be a difficulty. If rum came from a place where both stills were being used, would it not be rather hard for a man to certify?—The puncheons could be easily marked in that way, whether patent still or pot still.

12662. Have they power in the West Indies to compel people to so mark them?—No.

12663. Could it be done easily?—It could be easily done if you wished to make the regulations. If the Commission here insisted upon it being done, and if their recommendation took concrete form in the shape of law, then the colonies would at once have to conform to it or they would miss their market.

12664. There is another point I want to ask you about. You have had a good deal of trouble with imitation rum in the past. From your point of view in Jamaica it looks bigger than it does here to us; but as a matter of bulk is not the whole amount of imitation rum, compared with the genuine rum, a very small business?—A very small business from the Customs' point of view. I know the figures.

12665. Would you take it at this—that the amount of imitation rum imported into the United Kingdom in 1899 was as much as 49,000 gallons?—Yes, I expect so.

12666. Then it ran down, going by years, to 42,000, 26,000, 22,000, 16,000, 14,000, 17,000, 14,000 to 13,000 at present?—That is so.

12667. It was not in itself a very large thing, and it is declining?—Yes, I am glad to say.

12668. Very possibly it is the result of your efforts, but it is declining?—But the Colony helped well too.

12669. We have not prohibited it. It can be entered under its own description?—But I never saw in the last three years in England imitation rum sold in a public-house, and no one else ever saw it.

12670. I am talking of importation, and the importation of imitation rum, described as such, has run down from 49,000 gallons in 1899 to 13,000 gallons now?—Yes.

12671. So you will admit that is a declining trade?—Very declining.

12672. And compared with the figures of the imports of genuine rum it is a very small thing?—Yes.

12673. That is a very big thing and an established thing?—Yes; but under your existing regulations imitation rum will come in as rum easily enough.

12674. How could that be done?—Rum, your regulations say, should be the product of the sugar-cane and shipped from a port in a cane-growing country. If spirit was shipped from New Orleans to this country you would have to admit it as rum whether it was made in the Northern States from potato spirit or from sawdust, or anything else.

12675. That does not follow under our regulations?—I am going to the question of the Customs regulations. Rum cannot come from Germany, except under certain conditions, but you allow rum to come from France without a Consul's certificate as to the country of origin, and the French are the biggest offenders to-day.

12676. With regard to mixed spirits bottled in bond, you make this recommendation: "In the case of mixed spirits bottled in bond it should be stated on the label the proportions of rum and of patent still spirits present." What spirits have you actually in your mind when you say "Mixed spirits bottled in bond"?—Any spirits made in the patent still which would be mixed with rum.

12677. For what purpose?—For drinking.

12678. And selling in this country?—Yes.

12679. What are the patent still spirits?—You call rum any spirit that is made in a country produced from sugar-cane. I do not; I call it patent still spirit in many cases.

12680. In bond, for home consumption, you may not mix a foreign spirit with a home-made spirit?—No, you cannot mix imitation rum and rum.

12681. Nor can you mix rum brought from abroad with patent still spirit made at home?—No, because the duty is different.

12682. That has been the case a long time; but what are the mixed spirits to which you refer?—Take the spirit made in Barbados. That spirit, rectified, is allowed here in the Customs to be called rum.

12683. That is rum from Barbados?—You call it rum, but I call it patent still spirit. That is the difference.

12684. Then what you say is this: that you would not allow the mixing in bond of Jamaica rum with rum from another island produced in a different way?—I would not mind what they did if they put it honestly on the bottle. They can mix as they wish.

12685. What would you suggest should be on the label in that case?—I suggest the descriptions and the amount of patent still spirit, whether 50 per cent. of patent still or 50 per cent. of rum; and that you should have that on the label.

12686. You would have the amount?—Yes, I would have the amount to let the public know.

12687. Your fourth recommendation is: "That the Public Health and Revenue departments be empowered to enforce the provisions of the Merchandise Marks Acts as the Food and Drugs laws are a failure." I must leave one of my colleagues to deal with that last remark. With regard to your recommendation that the Revenue departments should be empowered to enforce the provision of the Merchandise Marks Acts, my own department is doing that now?—Yes.

12688. What would you suggest about that? Do you want it to do more under its existing powers, or do you want it to have additional powers conferred upon it?—I should confer additional powers on the Public Health authorities.

12689. But I want to keep you to the Revenue Department?—And our Revenue officers.

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12690. I want to know whether your suggestion is that the Revenue Departments should be given additional powers, or whether you mean they are not using the powers they have got now?—I should give them additional powers.

12691. With regard to the powers they have now, have you any complaint to make as to the way they are working them? Have you ever suggested, for instance, a prosecution by the Customs Department, which is the only one that has power to move under the Merchandise Marks Act?—I would confer more powers on the Inland Revenue.

12692. I ask you one question, and you always answer another. Let me put it again. I am talking about the Customs Department?—I thought you were talking of the Revenue Departments.

12693. With regard to the Customs Department, you would confer fresh powers on it. That I quite understand. With regard to the powers it has now, what I was asking was whether you think it is not altogether using them as fully as it might. There is no suggestion in your *précis*, but I want you to make the contrary statement for the comfort of my own department?—I think I would ask the Customs to enforce the powers they have now more fully.

12694. Have you any instance of a case? I have here before me two or three cases of people who have been prosecuted by the Board of Customs for false descriptions of spirits described as rum. One of the cases was brought to the Customs' notice by yourself, and the people were dealt with rather strictly. Have you ever brought a case to the Customs for prosecution in which you found they would not take the action you desired?—I have.

12695. What case was that, and the date?—I will give you the papers about it.

12696. Can you give a date?—In October last. Thirty-five cases shipped from Bordeaux from a firm there in transit.

12697. I have got that case—"75 cases imported to London ex France, Bordeaux, 25 cases Old Nick rum, Edwards and Co., Kingston, Jamaica"?—Yes.

12698. In that case the Customs went into the matter very fully, and they were advised that the facts were not such as to justify the seizure of the spirit on the ground that it was not the produce of Jamaica. Your complaint in that case was not that the Customs were not active, but that they did not see the facts eye to eye with yourself?—They did not wait for me to give them the facts. They released the shipment before they got the facts. They told me when I went to the Customs that I was to send in my report the next day, and before they got my report they allowed the shipment to go.

12699. Then you do wish to put it on the notes that when you have brought cases to the Customs they have not helped you over them?—I must say for this department, the Customs have done their very best in most cases, but at the same time I thought they might have done more in that case.

12700. You cannot do more than your best?—I except that case.

12701. I ask you to be rather charitable and look at things occasionally from other points of view. I think if you take that case you will find that it was very difficult for them to do anything else than what they did, and if on the whole you are satisfied with them you need not trouble about one case?—But that one case was a most important case, and the Canadian Government seized the rum when it arrived, and the Natal Government assisted us too.

12702. There is one statement at page 8 of your *précis* that puzzles me a little, and it has puzzled all the experts that I have consulted still more. I am sure you must have something behind in your mind about it, but it has bothered all of us very much. You say, "There is little doubt that the Inland Revenue will always favour the patent still as it is a well known fact in the Service that it requires much less supervision than the pot still distillery." That has puzzled a good deal all my advisers that I have consulted. Would you tell me what you have behind that?—I have spoken to hundreds of Inland Revenue officers, and they all say the same thing, but they will not come before you and say so, or before the Board. What is more, everyone knows that patent stills can be easily worked; there is no re-charging and no re-filling. It is a continuous still, and the officers have much less trouble to look after it, and the Board has much less trouble to collect their revenue.

12703. Your statement is that the Inland Revenue—and you speak of them as a Board——?—Not as a Board. I speak of the whole body.

12704. But the individual Inland Revenue officer does not control the policy of the Board. You have put down the statement that the Inland Revenue—that means the Board of Inland Revenue who direct the policy—will always favour the patent still. Really I should like some evidence of that. The fact that you have met isolated Revenue officers even in large numbers who hold those views has really no bearing on the case. I put this to you, that out of 185 distilleries in this country 155 use pot stills only?—Yes.

12705. Surely the statement in your *précis* is calculated to give an erroneous impression?—But what quantity of spirits do these patent stills produce as compared with the others? It is not the number of stills but the amount they produce and how much revenue they pay. The revenue is got from those patent stills with less supervision and cost to the service.

12706. You make a statement attributing a particular set of views to a particular department. You say the Inland Revenue will always favour the patent still?—I think so.

12707. I ask you to take it from me that as a matter of fact it has come as a great surprise that anyone should have made that statement, and especially a responsible man. I am surprised at it. I want to know what you have in the nature of a fact behind that general statement?—For the simple reason that there is less supervision necessary over the patent still than the pot still.

12708. Then your statement amounts to this, "If I were the Board of Inland Revenue I should favour the patent still"?—No, I would not.

12709. If you state that in your *précis*——?—No, I would not favour it. I would favour the pot still.

12710. Then why do the Board of Inland Revenue take a line which you yourself would not take? You are attributing motives?—Because it costs them much less money to collect the revenue. The Inland Revenue Board only recognise that their duty is to collect revenue. Sir Henry Primrose, in his time, used to state so.

12711. You are the most difficult person to get an answer from. It is your eloquence; I cannot keep you to a point?—You try to keep me so much to the point that I cannot explain matters.

12712. (*Chairman.*) How do the Inland Revenue favour the patent stills? Give us the instances where they have favoured them?—It is the general impression and feeling.

12713. You say "favour." You must show that by acts. What have been the acts of favouritism?—The acts have not been put in concrete form.

12714. That means they do not exist?—They do not exist.

12715. (*Dr. Horace T. Brown.*) Am I right in supposing that there are at least three classes of rum manufactured in Jamaica? We have been speaking of Jamaica rum as though it was always the same product, but are there not three distinct classes?—We have a rum called a common clean drinking rum.

12716. Is that for consumption in the Island?—Yes, and in this country. It is a self rum.

12717. Is it the fact that there are three classes which may be divided as follows: Class 1, rums which are consumed in the Island itself?—And exported there for consumption here.

12718. Class 2 is another class altogether which comes for consumption in the United Kingdom, and the third class, the highly-flavoured rums which are exported to the Continent for blending purposes?—Yes, the same rums come here as are drunk on the Island.

12719. You would not draw any distinction between those two classes?—No.

12720. I derive my information from this same paper of Mr. Cousins who classified them in that way, and he states that the rums which are consumed in the Island are made by a somewhat different process from those sent to this country, and he draws a distinction between them. You would not draw that distinction?—There is no distinction between them.

12721. You would say there were only two classes of rums?—That is all.

12722. The rums that are used for blending amongst themselves and to be consumed as self rums, and the second class of highly-flavoured rums sent to Germany for the purposes of blending?—Yes. May I give an instance of that. For instance, my own rum I have exported over here to be sold and consumed as a self rum or a common clean rum, and I have also sold it in the Island for three or four years running for consumption on the Island.

12723. Is it not the fact that each of these grades of rum meets the requirements of a special market and is judged by a different standard of quality?—No. Mr. Cousins is not a planter and, of course, does not sell rum as I have had to.

12724. You would find fault with that statement?—I would not find fault with it, but I have instances against it.

12725. We may take it there are only two distinct classes. Now with regard to that highly-flavoured rum, does any of that come to this country?—Yes, it is sold in this country for exportation again.

12726. Is any of that consumed in this country?—No, you could not drink it as a self rum.

12727. Does it all go to Germany?—I think nearly all of it. Some of it is used for hock to give a foundation.

12728. Does any of that come back to us as imitation rum?—I do not think very much comes back.

12729. Does any of it come back?—I do not think so.

12730. What is it sent to Germany for?—It is used there to blend with German spirits or inferior rums to give the other rums a higher flavour.

12731. It is used for spurious rums?—They do not call them spurious rums. It is a kind of top dressing.

12732. What do they call it?—Jamaica rum, I believe.

12733. They sell it as Jamaica rum?—Yes, I believe so.

12734. You send it to Germany for the express purpose of blending with the patent still spirit to be sold as Jamaica rum?—No, we do not do that. We sell it for the best price we can get, and take no cognisance of what happens to it afterwards. They cannot help what happens to it afterwards, and unfortunately I can take no steps in Germany to prevent it.

12735. I suppose the Customs duties in Germany are almost prohibitive. Can you send to Germany the class of rum that you can send to this country?—That I do not know.

12736. What was the object of sending that very highly-flavoured spirit there? Was it not to enable you to get a market for your rums which you could not get into the country on account of the high duties?—I do not think so. Many of the blenders produced that rum for the simple reason that they got 7s. or 8s. a gallon for it, which is a very high price.

12737. That is not the class of rum you produce now?—It is a flavouring essence. It is not a self rum.

12738. You sell it for the express purpose of being used as a flavouring essence?—No; we do not know what it is used for.

12739. This paper clearly shows what it is sold for, and that it is recognised as a rum made for blending with neutral spirit?—We have a vague idea about it. A large proportion of the total output is bought by merchants on the Island, who ship it to Germany.

12740. Do you mean to tell me, as a business man, you do not know what becomes of it?—In Germany we take no cognisance of it. I suppose it goes there and is blended. I do not make the rum myself. It is entirely another part of the Island.

12741. It is only a guess of yours that that is blended with patent still spirits and sold for Jamaica rum in Germany?—Only a guess.

12742. It is stated very clearly in the particular publication to which I have drawn attention that it is used for purposes of blending with the neutral spirit?—They say some is sent to Russia and matured for years, and the Russians use it as a liqueur.

12743. Supposing it came to your knowledge that it is used in Germany for that particular purpose of blending and making these imitation rums, should you have any objection to it being used in this country for the same purpose?—Certainly.

12744. Even if used as blended rum and sold as blended rum?—Yes, if mixed with patent still spirit and sold as Jamaica rum.

12745. You would not have that called rum?—No. You can call it anything you wish, if they do not call it Jamaica rum. I should not prevent it.

12746. You enable the Germans to do something, and, in fact, help them to do something, which you would condemn in this country?—I do not do it myself, but some do it in order to reap a better price for their rum. There is only a limited market for it.

12747. With regard to these imitation rums that come here, how are they manufactured? Do you know anything about them?—I believe those imitation rums are made from essences mixed with silent spirit. Such bottles of rum essence were sent out a few years back to the Jamaica planters from some German town. It was not enough to rob us of our trade, but added insult to injury by stating that we could make three or four gallons of Jamaica rum by adding a little essence to silent spirits.

12748. You think they are not made with your highly-flavoured rum?—I do not think so.

12749. Are you quite sure of that?—I am not quite certain, but it would not pay them to. They could get the essence so much cheaper. The highly-flavoured rum costs 8s. 6d. a gallon.

12750. I believe your endeavour as manufacturers in Jamaica is to produce this highly-flavoured rum in the largest quantities possible?—No. I know it was tried, and Mr. Cousins did his very best to induce the planters to do it, but they refused.

12751. They are not doing it?—No.

12752. Mr. Cousins states they are?—I state they are not. He brought forward a certain theory to do certain things which we objected to entirely.

12753. I suppose Sir Daniel Morris can enlighten us a little on that point as to how far those highly-flavoured rums are being produced more and more every year?—I do not think they are being produced more and more. I think they are going out. Sir Daniel Morris himself holds that Jamaica owes the peculiar characteristics of its rum to the Jamaica soil principally.

12754. With regard to the forms of stills which you use, you would confine the term "rum," you say, to the product of the pot still entirely?—Yes.

12755. That, I think, has been sufficiently threshed out, and I need not refer to it further. You rely to some extent on the analysis of rums in your case to give you, at any rate, a standard?—I used analysis as a pointer, but did not rely entirely on it.

12756. But all your prosecutions hitherto have been under the Merchandise Marks Act?—I have no power to prosecute otherwise.

12757. You would not rely on analyses in any way?—Yes, partly; but, strange to say, all my trade witnesses thoroughly agreed with the analyses in every case. We, of course, rely to a great extent on the bouquet and flavour.

12758. With regard to the method of distillation from the pot still, there is a little more information I should like you to give to the Commission. Do you have two distillations? Do you produce low wines which are re-distilled? Do you distil twice?—In the first place, I have given in my *précis* details of how the wash is made up. The wash is made first from first molasses.

12759. I understand about the wash, but I am on the question of the distillation. How do you carry that on supposing the fermented wash has gone into the still? Is that distilled twice?—When the rum comes into the house, the ordinary common clean rum, supposing we are getting 100 gallons from the still, we take with the first about 15 or 16 gallons of the fore-

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shotts, that is, the high wines. We take away then perhaps 80 gallons of rum, and of the balance, when the strength begins to fall a little or the bouquet and smell is not the same, which the distiller is able to discern at once, we put a portion away as high wines and a portion as low wines. The low wines are distilled again with the new wash, and the high wines are put into the retort—about 200 gallons to a 2,000 gallons still.

Adjourned for a short time.

12759a. (*Dr. G. S. Buchanan.*) I should like to ask you one or two questions on the administrative matter, and then ask you to help me to understand one or two of the technical points. On the administrative matter, when you took up this question of misdescription of Jamaica rum, your first step, I think you told us, was to go to the Board of Trade in connection with the Merchandise Marks Act?—Yes.

12760. What is the position there with regard to the Board of Trade? Do you have to ask the Board of Trade to make definite regulations under the Merchandise Marks Act, and get directions for conducting a prosecution under the Merchandise Marks Act?—No, we act independently, but they give us all assistance in preparing our cases.

12761. Is the assent of the Board of Trade necessary for you in instituting these proceedings?—No.

12762. And the Board of Trade themselves do not institute the proceedings?—No.

12763. Did you at any time press them to do that on your behalf?—I did at first. I thought they wanted more than was necessary to secure a conviction in a court because I had all the evidence that was sufficient.

12764. The prosecutions you have had under the Merchandise Marks Act have been in respect of what?—In respect of false trade description.

12765. That false trade description being what?—Rum not produced in Jamaica which is sold under the description of Jamaica as the country of origin.

12766. Have those descriptions been entirely in respect of rum sold in bottles and mislabelled on the bottle?—The first two prosecutions I had were in respect of an invoice. We had got a gallon of rum from two parties, and they gave an invoice describing it as "Jamaica rum." The other prosecution I had was as to misdescription on bottles.

12767. You have had no prosecution under the Merchandise Marks Act for misdescription in verbal terms over the counter, or anything of that sort?—No. It was held, I believe, that we could not get a conviction for a verbal misdescription, and that we must have an invoice or something definite to go upon.

12768. Or a printed notice?—Or a printed notice. A printed notice is not enough, because there are lots of places where they have on their windows: "Jamaica rum for sale here." I do not think that is sufficient. There must be an invoice or label with a description on the bottle.

12769. Your action is limited to that extent?—Yes.

12770. That may be an important limitation, may it not, in connection with sale in public-houses?—It is very hard to detect it in public-houses, and there we find great difficulty. I could bring fifty cases if I wished to bring them, but we did not want to harass, or punish, the trade too much. We only wanted to draw their attention to the fact that they could not commit those frauds and call it Jamaica rum.

12771. Then one result of your labours is that the description that is now made by the Customs of imported rum is as we have heard: "Rum," "Jamaica rum," and "imitation rum"?—They had "imitation rum," and "rum" before under the old orders, but then they added a new order to that, of rum which was the produce of Jamaica which would be entered in all the documents as "rum from Jamaica."

12772. I understand that goes right through until the Jamaica rum goes out of bond?—Yes, until it is entered in the publican's spirit book. They follow the description of the terms right along.

12773. Do I understand that the publican who receives rum has in all cases a statement whether it is rum, or Jamaica rum, or imitation rum?—Yes; it is on the Excise and Customs permit. I have some permits here if you wish to see them.

12774. So that if the publican sells as Jamaica rum what is not Jamaica rum, or sells what is a mixture of Jamaica rum and other rum, he would do that with full knowledge of the facts because he would have had to do it himself; that is to say, he would have had his rum coming either as "Jamaica rum" or as "rum," and if he sold the rum plus Jamaica rum as "Jamaica rum" he must have been the person who did it?—Yes, he would know it well. Of course, it is not possible now, but in the past it was quite possible that wholesale men might sell him rum as Jamaica rum on the invoice.

12775. That involves the action both of the Excise officers and of the Customs, does it not?—Yes, the same rule. All those regulations have to be sanctioned by both Boards before they are enforced.

12776. If the permits give the description of the spirit as Jamaica rum, or any other rum, once the spirit has got into the country it is a matter for the Excise?—It is generally cleared from the Custom House bond to the wholesale place, or it may be cleared under bond and passed into an Excise warehouse, and if that is described as Jamaica rum the Excise warehouse bond exactly follows the original entry.

12777. In connection with the prosecutions you have had have you in any way been able to utilise the Customs entry?—No, because they came into operation only this year. I had private outside information for all my prosecutions.

12778. You had, you told us, a case under the Sale of Food and Drugs Act in Aberdeen?—Yes.

12779. What was the nature of the offence alleged there, do you remember?—It was for selling a drink, which was represented as Jamaica rum, but which was not of the nature, substance, and quality of Jamaica rum.

12780. The evidence there was that of the analyst?—Yes.

12781. Was it entirely the evidence of the analyst, or was there other expert evidence?—No, it was on the evidence of the analyst alone. There were only 55 parts of ethers, and that was too low.

12782. (*Chairman.*) Was that one of the cases where they pleaded guilty?—Yes, my lord, they pleaded guilty in that case too.

12783. (*Dr. G. S. Buchanan.*) Besides that case have you had any others under the Sale of Food and Drugs Act?—No, I had not, I helped and instructed in those cases.

12784. Do you know of other cases in which the Sale of Food and Drugs Act has been applied to misdescription?—Yes, there was one case at Stockport some years ago. I can give you the facts about it. It was dismissed. The "Lancet" wrote a very strong article on it afterwards and said that it was a very peculiar case.

12785. You say in your *précis* that one advantage of this new system that you have got with the aid of the Revenue officials is that you will be able to trace the rum from the time it is landed to the time it is entered in the publican's spirit book?—Yes.

12786. You told us that there was a good deal of difficulty in finding out what happened after that—that is to say, what is done by the publican. Can you suggest any actual method by which the publican's proceedings can be more controlled than they are at present? You have the history of the thing down to the publican's spirit book, but how are you going to control the publican?—The Excise officer could. He has full power to inspect the spirits and see all permits of every description.

12787. Let us assume that you have it correctly described in the publican's spirit book. What authority is there, and in what way can you check what the publican gives?—I would give the full power of the Merchandise Marks Act to the Excise officers to prosecute for a false description, and they would be able to check it by the description of the spirit, and this knowledge from the permit of where the spirit comes from. The spirit is under the control of the Revenue Department from the time it is delivered to the publican to the time it is sold by him. Under the Merchandise Marks Act the onus of proof is thrown on the defendant.

12788. You know perfectly well what the publican has received. He has received rum, and he has received Jamaica rum; he is asked for Jamaica rum, and he is supplying you with some other form of spirit. How are you to check that he is not giving you Jamaica rum?—I admit there is a difficulty in all those cases.

12789. You have no suggestions to make on the point?—No, except that you should give power to the Excise officer who knows all the spirit that the man has received. I would suggest that you should enlarge his powers.

12790. You have no suggestion to make as to co-operation between the Sale of Food and Drugs Act authority and the Excise officers in that matter? The sampling of the finished article is under the Sale of Food and Drugs Act?—Yes. The Islington case showed us how difficult it was to get a conviction, but if you gave power to the local authority under the Merchandise Marks Act along with the Sale of Food and Drugs Act you would find it much more satisfactory.

12791. That, of course, would have to be by legislation, and under defined conditions?—Yes.

12792. The action you have taken is for the protection of Jamaica rum in the interests of Jamaica trade?—Yes.

12793. What I think very much interests this Commission is how far the description of Jamaica rum being accurate is really in the interests of the consumer. What you are taking action to secure is purely a territorial description, is it not? If it comes from Jamaica it is Jamaica rum?—Yes.

12794. As you have told Dr. Brown, you make in Jamaica essences which are practically rum essences?—It is blending rum.

12795. Does that come to this country?—It is not consumed in this country.

12796. Is it blended in this country?—No, it is too expensive. It goes abroad, it is too expensive to blend it here. They pay 6s. and 8s. for that rum, and they can get all the rum that they want for blending better and cheaper than Jamaica rum.

12797. There is no rum sold in this country as Jamaica rum that contains that blended spirit?—Not that I know of. Of course, they will not use that high class Jamaica rum for blending purposes, but they will use a much inferior rum.

12798. Do I gather that there are no patent stills in Jamaica?—None.

12799. Supposing a Jamaica distiller set up a patent still, have you anything to stop him?—It would not be Jamaica rum.

12800. But, as far as we are concerned here, he would have made rum that came into this country from Jamaica?—Yes, but it would be the duty of the Legislative Chamber to pass a law at once defining what is Jamaica rum, and they would do it pretty sharp too.

12801. Is there at present any control by the Jamaica Government, or by any association of distillers or planters, which really gives the people in this country any assurance that Jamaica rum is in all cases a satisfactory product?—It has been known for the last 150 or 200 years as such, and has been accepted as such, and the price has been about twice or three times that of the other rums. The "Lancet" and other leading authorities have taken it up, and they say that Jamaica rum contains much more ethers and other secondary qualities, and is more valuable from a health point of view.

12802. Can you tell me whether there is at the present time either direct legislation or regulations in Jamaica as regards the manufacture of rum?—None.

12803. Is there any association or any effective public opinion among the distillers or planters in Jamaica that would restrain an individual distiller from adopting a cheap practice, or from producing rum which does not come up to the ordinary requirements?—They would not be allowed to produce it in a patent still. I have no doubt the Planters Association of Westmoreland (Jamaica) would at once oppose it.

12804. Let me take the points you lay stress upon. There are four things that you tell us are necessary. First of all, the soil and water, which, knowing nothing about Jamaica, I will assume is the same all over the island?—No, it is not the same all over the island. It is the same as in France, where lands in a certain district produce a better champagne than other districts. In Jamaica some estates produce a much better rum.

12805. With regard to the molasses, you told us that you must not remove more than one purging of sugar before you make the rum?—To make the first molasses we boil the sugar once, and then we purge it through centrifugals, and as the result of that purging we get first molasses. In Demerara they boil it over again and make second and third sugars, they remove all the sweet from the molasses, and make rum from that.

12806. What control is there in Jamaica which prevents a maker of Jamaica rum from doing exactly what they do in Demerara with regard to the sugar?—None, except that if that was done the price of rum would fall down to a very low figure. It is judged here by its worth. A man's common sense would not let him do it. You might as well ask Jameson to make patent spirit. He would not do it, because it is against his interests.

12807. But it is in the interest of the Demerara man?—He has a very much larger plant than we have, in most cases, and he finds that he gets a better market for his sugar, because Demerara sugars are famous. In that way they make the first and third sugars. We should get an accumulation of molasses, and could not store them. Therefore, we have no similar plant to make a similar quantity.

12808. In Jamaica you make the rum and in Demerara it is a bye-product?—In Jamaica rum is our first product, and sugar is a bye-product.

12809. Do you think that really can be said of all the distillers in Jamaica?—Yes; some make much higher class rum, and others cater for the home trade here.

12810. Your third point is the manner in which the wash is set up for fermentation. You say there are three ingredients which with water are used for the setting up of the wash for fermentation, all of which are the produce of sugar-cane:—scum or skimmings, molasses, and dunder. They are used in proportions according to the judgment and practical experience of the distiller, who is guided by all the circumstances connected with the estate and distillery. I suppose that varies at each of the distilleries, does it not?—We find that some distillers, like myself, for instance, use what is called a sour cistern. I let a lot of my cane juice sour. I would not get such a large quantity of alcohol, but I would get a higher amount of ethers and secondary products. Acidity is created.

12811. That is a peculiarity of your own process, and one or two others?—No, in Jamaica it is the general rule.

12812. It is not specially necessary to all Jamaica rum?—No, they may not use it to such a large extent, but a certain amount of sour cane juice is used on all estates.

12813. Do you recognise that rum from all parts of the West Indies has the same good quality as your Jamaica rum?—No.

12814. Even when they use a pot still, and use only one purging of sugar, or when they use rich molasses?—No; you can only get one Cognac brandy in the world; it is the same with us, you can only get one Jamaica rum.

12815. You said one of the things that you wished there should be action taken to stop is blending and vatting in bond of patent still spirits with Jamaica rum. I am not quite clear as to what that blending used to be. It is stopped now?—Yes.

12816. Was it Demerara rum?—I have a list here which I will hand to you. (*The same handed to the Commissioners.*) Those are the stocks of rums sent to France. Of course, France is a very large consumer. Very often those rums are put into casks and sent out again.

12817. Has any case come to your knowledge in which rum out of bond has been mixed with grain spirit in this country?—No. I think they are inferior rums. Of course, they could be mixed with grain spirit in this country, but I have not come across them.

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12818. Has the method of distillation been given in detail in any text books? Is there any standard work on rum distillation?—There are lots of works on planting in the West Indies and Jamaica, but I do not know about text books on the subject.

12819. When you referred to the question of labelling bottles in bond, what you wished for, I understood, was a statement by a label across the neck of the bottle that had to be broken when you opened the bottle and drew the cork, that stated that it was Jamaica rum and bottled in bond?—Yes.

12820. And that was the main thing?—Yes, that would be optional. Now the Customs will not allow them under any circumstances.

12821. Was action taken to recognise Jamaica rum by a separate Order?—Yes, by a separate Order.

12822. It did not require any legislation?—No. Legislation was not necessary there. The Board has full power.

12823. With regard to age, can you tell me whether the price of rum varies greatly in respect of age?—So far as the planters were concerned, the prices which they obtained here were much the same for old and new. The new stretch better than the old for blending with patent still spirit, but of course old rum sold retail was much more expensive.

12824. Is rum matured before it leaves the colonies?—No; it is shipped as we make it. It is bought now by a company, who take a lot of it, and it will improve by age very much. In the colonies they do mature some rum, and charge as high as 7s. 6d. a bottle for it, and they get it too.

12825. Is the bulk of rum that reaches this country over or under two years old? Could you tell us that?—It is under two years old.

12826. Including Jamaica rum?—Yes. There is not more than a year's supply in stock now, I suppose.

12827. Any maturing which is done is done like the whiskey is matured, namely, in oak casks?—In oak casks. It is shipped in puncheons from 112 to 116 gallons at 36 over proof.

12828. (*Dr. Cushny.*) Can you give us some information on one or two points on distillation?—Yes.

12829. First of all, how do you induce fermentation? Do you add yeast to the wash, or how does it ferment?—It is spontaneous. We add nothing. We add no chemicals of any description. Ours is the only Colony that adds no chemicals of any kind.

12830. How long do you allow it to ferment?—We allow it to ferment from eight to twelve days for ordinary clean drinking rum. German rums take about thirty days, or longer. It is very slow fermentation.

12831. I do not quite understand the still. It is not a simple pot still as I understand. I cannot quite make out what it is?—You have the drawing before you.

12832. Yes, but I cannot make very much out of it. Would you mind going to the model of a pot still that is behind you? Can you tell us from that?—It is exactly the same as *this*. (*Pointing to the model.*) There is a retort over *here* holding about 200 gallons of high wines to, say, 2,000 gallons of wash. The spirit vapour from the wash passes through the goose-neck into the retort, which is full of high wines, and there turns the high wines into spirit vapour with the spirit vapour from the wash, and all passes over into the worm and comes out as rum.

12833. (*Dr. Horace T. Brown.*) It is steam distillation?—No.

12834. (*Dr. Cushny.*) It is a mixture of direct fire and steam distillation?—It is a liquid steam to a certain extent in the retort.

12835. What is the connection with the retort? Is the retort connected with the neck of the worm? Does it connect directly with the first still?—Yes.

12836. Is there direct connection without going over the neck? In this still there is a small pipe that comes up?—That is for the steam.

12837. Is there any connection like that in your first still?—No. There is a cock in the bottom of the retort which we turn off when we have finished distillation.

12838. What do you do with that?—That refuse of the retort, which is small, is conveyed to the manure heap.

12839. What strength does your rum come over at?—It comes over about 36 to 40 per cent. over proof.

12840. What is the volume of that retort?—My still is only a 2,000 gallon still, and there is a retort that contains about 200 gallons.

12841. That retort is quite empty until the distillation is begun?—No, until we distil. The retort is filled with the high wines, which are called the charge. The still is loaded with the wash and the low wines and securely fastened down, and a fire is then placed under the still that holds the wash, and then it is condensed after a time by the worm.

12842. What is the distance from the bend at the head of your still to the retort?—It would be about 12 to 14 feet.

12843. Do you get your vapour cool enough in that distance to condense in the retort?—The vapour does not cool in the retort. It cools in the worm after passing through the retort. We use wood, not coal; therefore we get a less intense heat.

12844. What is the object of that retort? What do you think it does?—We get the high wines and a portion of the low wines distilled again.

12845. How do you take that? Do you take that at the end of the worm?—Yes.

12846. In the same way as you take the rum?—Yes. The high wines, the low wines, and the rum are all taken at the end of the worm at different times during the running of the still.

12847. What do you do with the first shot?—That is put into a vessel by itself.

12848. What do you do with it finally?—For each distillation during crop it is used as a charge for the retort; at the end of the crop it is put in a cask and kept till next crop as a charge for the first still run.

12849. Then you distil off those high wines and low wines by the same distillation?—Yes, the same distillation.

The witness withdrew.

Mr. Ferguson.

Mr. FERGUSON, called.

12850. (*Chairman.*) You are Senior Inspector of Excise in the Australian Commonwealth for the State of Victoria?—Yes, my lord.

12851. What is your exact position in the Australian Excise? What are your duties?—My duties are the general supervision of Excise matters in the State of Victoria, and also with regard to some of the other States. It is the general supervision in connection with distilleries chiefly.

12852. You happen to be over here on leave at present?—Yes. I happen to be over here on furlough for my health. Just before I left I saw that this Commission was sitting. I saw a telegram that this Commission was appointed, and so I thought that I would bring over with me any papers relating to the Commission that had sat in Australia, and leave them with you. I thought perhaps they might give you a little information.

12853. I presume that you in your official position do not wish to give us more than the facts?—That is all.

12854. Then will you keep to that, please. What is that Commission that you speak of?—It was the Tariff Commission appointed to inquire into the Tariff and Excise matters, and the question of whiskey and brandy, and matters of that kind came also under their purview. They reported to the Commonwealth Government upon it.

12855. What is the principal spirit consumed in Australia?—Whiskey.

12856. Is that made in Australia or imported from outside?—A quantity is made in Australia, but the bulk of the whiskey that is consumed there is imported.

12857. Is it imported from Scotland or Ireland, or from both?—From both.

12858. Do you know whether it comes to Australia as pure spirit either pot or patent, or does it come as blended spirit principally?—That is impossible to say. It comes as whiskey, but whether it is pure malt or a blend it is impossible to say. It is imported as whiskey.

12859. Does the Commonwealth, or any State, take any steps to check the importation?—Do you mean with regard to the name of the liquor that is given?

12860. In the first place, with regard to whiskey, is there any check except the duty put upon it?—They say that it is a spirit that is fit for consumption, but that is all.

12861. To what extent do they investigate that?—If necessary they examine it, and it is sent to Government analysts to report upon it.

12862. Have any steps been taken in Australia to what we call "ear-mark" the whiskey as to its quality?—Not so far as that which is imported is concerned, but with regard to the Excise there is special legislation defining what whiskey is.

12863. As regards imported whiskey that seems to be left at large?—Nothing as yet has been done with respect to imported whiskeys.

12864. Has the intention of doing it been considered?—It has been talked about, but nothing definite has been done.

12865. Is any restriction put upon the age of the whiskey before it is admitted from the Customs?—Yes.

12866. Have you put on any check? What is that check as to age?—All imported spirits must be at least two years old before being allowed to go into consumption.

12867. How can that be checked? What is the practical method by which the Customs officer checks the two years?—So far as the imported spirit is concerned at the present time a declaration by the exporter has been accepted that it is at least two years old on leaving the United Kingdom.

12868. That refers to a whiskey imported into Australia, but does it all come from the United Kingdom?—A slight quantity may come from America, but practically all whiskey that is imported into Australia is made in the United Kingdom.

12869. Have you anything more to tell us as to the imported whiskey before we go to your Excise?—No.

12870. What is your rule with regard to Excise?—With regard to that, I have a copy of our Excise tariff. Brandy is defined in the Excise tariff in this way. It must be distilled wholly from grape wine by a pot still or similar process at a strength not exceeding 40 per cent. over proof, matured by storage in wood for a period of not less than two years and certified by an officer to be pure brandy.

12871. Now, will you give us your rule with regard to whiskey?—If you would excuse me, before I give you that I should like to give you that for blended wine brandy. That is distilled from grape wine and containing not less than 25 per cent. of pure grape wine and spirit (which has been separately distilled by a pot still or similar process at a strength not exceeding 40 per cent. over proof), the whole being matured by storage in wood for a period of not less than two years, and certified by an officer to be brandy so blended and matured.

12872. With regard to those Excise duties, is this a definition to control the rates and taxes? What is the definition framed for?—In order that pure grape brandy may be placed upon the market, and that it shall come under that definition. It is being charged at a reduced rate of 10s., that is, a reduced rate as compared with the imported brandy. All the imported spirit is liable to a duty of 14s.; but these Excise rates are lower in order to give encouragement to local production as well as otherwise.

12873. (*Dr. G. S. Buchanan.*) They are lower in the case of pot still brandy than in the case of blended brandy?—Yes.

12874. (*Mr. J. Y. Buchanan.*) That is Australian brandy?—Yes. I may say that the first explains itself. What is called blended brandy is where a grape wine brandy is made at a very high proof, say, by a patent still, and then that patent still spirit from grape wine is mixed with the other—75 per cent.

12875. (*Chairman.*) With regard to both the brandy and whiskey, the tariff table says that it must be made by a pot still or similar process. What does that "similar process" mean?—If I may refer to the papers, I will give you what the Commission said.

12876. We will not trouble you to do that. Does "similar process" include patent still?—Yes; but when it is produced by a patent still it must not come over at a greater strength than that specified in the tariff.

12877. You do not shut out the patent still manufacture?—No.

12878. This definition, as I understand it, has nothing to do with the public health, or the benefit of the consumers themselves, but is a question of mere tariff duty?—No, it is for the public. First of all, take brandy. It is in order that they may have a pure brandy, that is, containing all the constituents of a pure brandy; and then if anyone likes a brandy that is inferior in the essential elements, then it is made from patent still spirit.

12879. Now with regard to whiskey. The inferior whiskey would, of course, be a cheaper whiskey?—Yes.

12880. Is it your idea that that inferior whiskey is so inferior that it is injurious or deleterious to health?—There are some inferior whiskies that are not very nice to take, and the object of this tariff is, so far as our Excise is concerned, that the distillers there may make a spirit that will be fit to be drunk by the public.

12881. Is it an *ad valorem* payment or an absolute duty?—For instance, I will take whiskey distilled wholly from barley malt by a pot still or similar process at a strength not exceeding 35 per cent. overproof, matured by storage in wood for a period of not less than two years—that is 10s. for a pure malt whiskey; but if it is a blended whiskey, partly of malt spirit and partly of grain spirit, then it is 12s.

12882. That may or may not be the price?—That is the duty.

12883. A man may be able to afford to pay a 12s. duty upon a cheap article, and then he does not pay so much for the whole. Supposing he got an article for half price?—I cannot go into that part of the question.

12884. This 12s. might be paid by a man who has paid very much less for his whiskey?—Yes. No doubt the blended is cheaper than the malt.

12885. I do not know whether there is anything else that you think it is material to tell us. You have handed in this paper. Is there anything upon it to which you would like to call our attention?—No. I am just open to give you any information that I can.

12886. But you know the information that you have got and we do not. In your manufacture in Australia to what extent is the patent still process used?—I could hardly answer that question, because some of the whiskey is made first in the patent still, and then afterwards put through the pot still.

12887. What is that for? That is not blending?—No.

12888. Why is that done?—They say that it improves it, and I think it is for that more than anything.

12889. (*Mr. Guillemard.*) It is put through the patent still first and pot after?—Yes.

12890. Not the other way about?—No, the patent first, and afterwards the pot.

12891. (*Chairman.*) Speaking generally, what should you say would be the comparative number of distilleries using pot and patent?—I could not answer that, because there are distilleries where they have a patent still and also a pot still. I could hardly tell you from

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memory the percentage of patent whiskies made compared to pot still whiskies made.

12892. Which do you think is in the majority?—The patent still. I think more is done by the patent still than by the pot still at present.

12893. Has that differentiation altered of late years? We know that up to a certain time the pot still was the only known method?—I do not think it has made much difference.

12894. When did you commence to manufacture whiskey in Australia?—In the late fifties—that is about 50 years ago—there was a distillery in Victoria. They commenced making whiskey then.

12895. (*Mr. J. Y. Buchanan.*) That must have been just when Melbourne was founded?—It was not far off that.

12896. (*Chairman.*) Has there been lately any alteration in your duties in Australia on imported spirits?—When the Commonwealth passed its first Excise tariff there was only a difference of 3s. in favour of brandy, and only 1s. in favour of other spirits; but that did not suit the distillers, and distillation practically entirely ceased so far as whiskey was concerned, and it affected brandy as well. Then in 1906, when the Spirit Act came into force, they made a difference and they passed this Excise which made a great deal of difference between the imported and the Excise.

12897. There was an increased preference to the Colony?—Yes.

12898. To what extent?—To the extent of 4s. in the case of brandy or whiskey, and for blended whiskey a difference of 2s. Blended brandy, 3s.

12899. An increased duty?—No, a lower duty on the Excise than the imported.

12900. I am speaking of the imported duty?—There has been no difference in the imported at all since the establishment of the Commonwealth.

12901. The Excise duties were lowered?—Yes, the Excise duties were lowered by the second tariff.

12902. With regard to the relative duties the home production has the better position?—Yes.

12903. Do you get any, what I may call, false spirits attempted to be introduced into Australia, such as spirits made out of beetroot?—Importations of that nature have been introduced.

12904. What steps have the Commonwealth taken of checking that?—I think they were taken into bond and exported again.

12905. They were not allowed to enter?—No, some of them might have entered, but if it had come under the distinct name of brandy or whiskey it would not have been allowed.

12906. It would have been treated as undesirable goods?—Yes.

12907. And sent back?—Yes.

12908. You have the two-year-old check in entrance that you have told us of. What does Australia do as regards its own spirits?—They must be two years old matured before they are allowed into consumption too. I may say that there was an exemption with regard to gin—they do not enforce the two years' age limit with regard to gin.

12909. I understand that in Australia distillers are allowed to blend in their own distillery?—Yes.

12910. With regard to blending, is there any compulsion upon the distiller to put any mark on the cask?—At present there is not.

12911. Has there been?—No, because this legislation is new. It is merely on its trial, and there has been nothing distinctly done except, of course, that in passing the entries they have to state it, but they can get a certificate for whatever kind of spirits they clear.

12912. (*Dr. Horace T. Brown.*) In Australia what restrictions have you with regard to the ingredients used, that is to say, the materials used in the preparation of whiskey?—With regard to whiskey there it is laid down that whiskey paying 10s. a gallon must be made from malt only. Then with regard to blended whiskey, it must be made from grain only, and an officer in charge of a distillery sees that when the distiller is making a particular mash, or whatever it may be, it is according to what its quality ought to be.

12913. Is grain spirit allowed to be sold under the designation of whiskey?—No, not now. Do you mean sold generally after it is cleared from the Customs?

12914. Yes, I mean your whole manufacture?—Before or after paying duty—in bond?

12915. Yes, when it gets into public consumption is it allowed to be sold?—When it pays duty we have no control over it.

12916. It may be sold as whiskey?—Yes, it may be sold as whiskey afterwards. When it goes out we have no control over it, but the probabilities are that if it is not made from these ingredients it may be a false trade description.

12917. Have you any definition of whiskey which covers the whole thing generically?—No, we have not as yet; we are waiting. There is a definition, I may inform you, of brandy.

12918. Yes, I am coming to that. You have stated that the Excise duty is lower on malt whiskey?—Yes.

12919. I do not think you have told us exactly why?—The general opinion, whether it is right or wrong, is that whiskey made from pure malt is the better article.

12920. Better in what way—better for health or how?—It contains real whiskey, not but what the grain whiskey may be equally as good, but they have to encourage malt whiskey as being the better policy to pursue.

12921. But if the malt whiskey is in itself a better product, does it want artificial encouragement?—When once we really get a definition of what whiskey is then we can take action to see what is is. At the present time it is such a wide term that we can take no action against the improper use of the word "whiskey."

12922. You are waiting, to some extent?—Yes.

12923. You have some definition of brandy at present?—Yes.

12924. Will you give us that?—I have given you what it is so far as the Excise is concerned.

12925. You have a definition for sale purposes, I understand?—Yes, in relation to trade and commerce with other countries, and amongst the States: "No person shall describe as brandy any spirit not distilled wholly from grape wine." That is the Spirit Act of 1906.

12926. Would any grape product blended with corn product of any kind be allowed to be sold as a blended brandy?—No, certainly not.

12927. The term brandy would not come in at all?—No, brandy would not come in at all if it was anything else than spirit made from grape wine.

12928. You have, I believe, excepted gin from the time limit. There is no time limit for gin, is there?—No, not for gin.

12929. It comes in without any special declaration as regards age?—Yes.

12930. Is there any gin made in Australia?—Yes, there is a good deal of gin made in Australia.

12931. Is that made by the same process as the gin that is made in this country?—In one distillery it is made by a patent still, and in the other one it is made by a pot still.

12932. You told us a little time ago—it was in the case of whiskey—that it is sometimes distilled first in a patent still and then in a pot still?—Yes.

12933. By two successive distillations?—Yes.

12934. What is the object of that?—I do not know the distillers' reason for doing it. I did not ask.

12935. Is it to evade any regulation?—No, nothing whatever like that.

12936. (*Mr. Guillemard.*) There is another suggestion. Does it by any chance work it into a lower rate of duty?—No.

12937. (*Dr. G. S. Buchanan.*) The patent still always has to produce the spirit at less than 40 over proof?—Yes.

12938. It is entirely different from any patent still over here?—I do not know that it is different, but they have to so regulate it as not to produce it above that.

12939. That is an entirely different practice to what we have over here. We produce over here patent still spirit at a much higher percentage over proof than that?—Yes, and so it was formerly in Victoria, but since this tariff came in they have reduced the strength from what it was formerly.

12940. (*Dr. Horace T. Brown.*) Do you think that that is done for the purpose of improving the article?—Yes, that is the object.

12941. (*Dr. G. S. Buchanan.*) Can you say, as a matter of fact, whether the product of the patent still that comes out in this way at less than 40 over proof is an article with a lot of bye-products?—It contains the bye-products, and that is the reason of limiting the strength at which it is to be put out. It contains some of those products which are so essential to make a whiskey. That is recognised.

12942. By your *précis* I see you may be asked, "Are the services of the Excise officers paid for by the distillers?" What is the answer to that?—The answer to that is that if they work a full day, say, of eight hours, the officer is always provided, or if they work another shift of eight hours, but if the distiller goes into a broken period of eight hours he has to pay for the time of the officer.

12943. The recommendations of the Commission that you were speaking of had to do with the quality of the spirit to some extent, had they not?—They had.

12944. Will you give us the reference to those which deal with the question of the quality of the spirit, because I think they will be useful?—I will leave with you the various documents relating to it. I will hand you the original Report. (*See Appendix K.*)

12945. With regard to the age limit, do you allow any spirits made in the Commonwealth to go out before they are two years old?—No, none, except gin or except spirits that may be required for industrial purposes, such as medicines or tinctures. With those they have to enter into a bond that the spirit will be used only for those purposes, and they must keep a record showing how they have used it.

12946. It has been stated to us that to require those to be kept two years in bond would cause a good deal of difficulty with regard to the use of industrial spirits. You have got over that?—Yes, we have got over that. It is merely the entering into a bond stating what they are going to use it for, and it comes to them without the two years' limit. They have to keep books showing how it is used, and that it does not go into consumption as a potable spirit.

12947. Can you tell us about the labelling of bottles that are sent out from distilleries under Excise supervision? Do you allow the distiller or the bottler to make any statement under your authority?—The Spirit Act says that an officer may, at the request of the distiller or blender of any spirits, give a certificate in the prescribed form certifying that the spirits are pure Australian brandy, or blended brandy, or Australian malted whiskey, or blended whiskey, or Australian rum. The forms in the regulations give the form in which the certificate is to be.

12948. How does that apply to the bottle? Can the distiller put any statement on the bottle, such, for instance, as "Bottled at the distillery," or "Bottled in bond"?—Yes, he can put that on the label, but there is also a seal or label affixed to every bottle, and to every vessel that is sent out from the distillery.

12949. What do you attest by that seal? What does the seal mean?—If you have before you the spirit regulations there is a copy of the seal given there.

12950. Can you give me the effect of them? When you put a seal under Excise authority on bottles of whiskey or brandy that are got from a distillery, what would you vouch for?—When they are bottling brandy they have a seal exactly like *this* on the top of the bottle (*pointing*). Wax was put on and the bottler put the seal on it. The seal is given to him in the presence of the officer, and the officer sees that it is affixed. This is: "Commonwealth Customs. E.R. Pure Australian standard brandy." Or on the cask there can be a label, or on the bottle there can be a label which is affixed to the bottle certifying what the contents are.

12951. Do you charge the distiller for that?—No, no charge is made by the Excise authorities for seeing that this is done. It is part of the officer's duty in connection with the distillery.

12952. Does the distiller like to have it done?—Some of them are asking for it to be done.

12953. (*Mr. J. Y. Buchanan.*) You mentioned Australian rum. Is there much rum made in Australia?—There is now beginning to be a large quantity. What the quantity is, of course, I cannot say from memory, but they have a lot of bye-products from the sugar mills, and also from the sugar refineries in Queensland, where the mills are. The refineries are in Sydney, Melbourne and Adelaide, and the bye-products are made into rum.

12954. Do they ship sugar, the molasses, from Queensland?—No, they make it on the spot; in fact, they are making it all on the spot now, because it is cheaper. Instead of sending it down in casks they distil the spirit on the spot.

12955. Is there much Jamaica rum imported?—I cannot say from memory, but it is small in comparison with whiskey. Whiskey is the chief spirit imported.

12956. What duty would be charged on Jamaica rum?—14s. per proof gallon.

12957. Have you an Excise on the native rum?—Yes, that is included in the tariff, and there is a definition of what it is: "Rum distilled from molasses by a pot still or similar process, at a strength not exceeding 45 per cent. over proof matured by storage in wood for a period of not less than two years, and certified by an officer to be pure rum." That is 12s. a gallon.

12958. And the other is 14s.?—Yes, the imported is 14s.

12959. That is 2s. a gallon in favour of the Australian rum?—Yes.

12960. (*Dr. Cushny.*) Your "similar process" as to rum would include the Coffey still?—Yes.

12961. (*Dr. Bradford.*) It only includes the patent still if it is worked in a particular way?—Yes, a "similar process" must give that percentage over proof, that is fixed by the definition.

12962. (*Mr. Guillemard.*) It is very important to get that clear on the notes, because over here it would be impossible, if that form of words was put into an ordinary English publication, for anyone to understand that "pot still or similar process" included a patent still. May I take it that in the Tariff Excise Duties, when the expression "pot still or similar process" is used, and simply put shortly like that, it means exactly the same as is meant by the fuller statement in No. 15 of the Recommendations of the Report?—Yes, that is it: "That the evidence is strongly in favour of the superiority of the pot still as a machine for the distillation of brandy, whiskey and rum; but, on the other hand, there is evidence that the patent still may be so worked and regulated as to produce the same alcoholic distillate as the pot still. In view of this conflict of opinion we cannot undertake to say that preference should be given solely to pot still spirits, but we suggest that it be given to spirits the produce of the pot still or of any similar process yielding substantially the same results as the pot still. By this provision the product of the patent still will not be excluded from the preference which we are prepared to recommend. If so managed as to yield spirit of a low alcoholic strength retaining natural esters and characteristics, the patent still will not be disqualified."

12963. May we take it from you that when "pot still or similar process" is used in that abbreviated form under the heading "Excise Duties" in the Excise tariff it means that same thing?—Yes, it does exactly.

12964. The Excise tariff is dated the 12th October, 1906, and the Report of the Royal Commission is dated 8th May, 1906. May we take it that the Excise tariff is founded on the report of the Commission?—The tariff is founded upon the recommendations of the Commission.

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12965. Then the thing that the tariff looks to is not the process by which the spirit is produced, but the strength at which it is produced, and the bye-products that go with it?—The products that go with it is the chief thing The chief thing is not to have under these designations spirits that are silent spirits doctored up.

12966. The Commission may take it that it would go as far as this, that the tariff merely looks to the spirit as a product—as a result—and not to the machinery that is being used to produce it?—That is practically what it does.

12967. There is a party that has been represented before this Commission strongly that would differentiate very strongly between an identical product that was produced by the two stills; they would allow one and reject the other, but that would not be your view?—No. If the patent still can produce a similar article to the pot still at similar strength, then they allow the patent still to be used.

12968. (*Dr. Horace T. Brown.*) Do you know how it is to be determined whether the products are the same? What standards have you?—This Excise tariff is very recent, and it has only been in force since October, 1906. We have not gone into an elaborate examination of the details yet. In new legislation you must go gently.

12969. I suppose they realise that it will be necessary to do so?—Yes, in time it will be necessary to do so, and to see that it does, but new legislation does not like to be too drastic.

12970. (*Mr. Guillemard.*) I am an Exciseman as well as you, or rather, I was. Do you find it easy in working to distinguish a spirit as substantially the same as one produced by a pot still? I should be very sorry to be set down here in England to administer that Act of yours?—We have found no difficulty as yet, but I have not gone far enough with this to give a definite opinion upon it.

12971. May I put a hypothetical question? Say a spirit was brought to you, and somebody said: "I do not think that is entitled to the lower rate. I do not believe that is produced by a similar process." How would you go to work to check it?—The first thing to do would be to see at what strength that spirit came out of the still. That is the first thing.

12972. Then after finding out the strength what would you do?—After finding out the strength, I suppose they would get it analysed to see what it was; but that has not been done as yet. We have not gone as far as that yet.

12973–4. Beyond checking the strength you have not gone?—No, we have not gone beyond the strength.

12975. (*Dr. Cushny.*) How do you control the strength at which this spirit comes from the still?—When the wash is all distilled, then the strength is taken from the spirit receivers. If it is over, it cannot come under this Act at all; but if it is under it it falls within it.

12976. That, of course, is the average strength throughout the distillation?—Yes, the whole distillation. Of course, it may in some instances in the working come a degree or two over, or it may come a degree or two under. Our rule is that we take the spirit receiver and see what is the strength of the spirit in that.

12977. Have you found any great differences between the spirits coming over above and those below 40 per cent.?—No, we have had no difficulty with regard to that at all.

12978. Have you found any marked differences in flavour, and that sort of thing?—That we have not gone thoroughly into yet so as to be able to express an opinion on that point.

12979. Why did you choose 40 per cent?—The Royal Commission decided that. Of course, I cannot go into its reasons why it did or did not, but they thought that would be a fair thing. They might have gone lower or they might have gone higher, but I think they have struck that as an average, so that it would give an opportunity of striking a fair average in connection with it. In many instances, of course, it is a great deal lower than that. They did not want to fix too low a limit in connection with it, but they wanted to see how it would work out in time.

12980. I do not think we have had any evidence that such an alteration in the strength of distillation would alter the spirit to any material degree?—They took a great deal of evidence there, and that was, I think, the almost unanimous conclusion. The question was very fully debated in the Commonwealth Parliament at the same time.

12981. The idea has not been brought before us until now?—That may be so.

12982. (*Dr. G. S. Bughanan.*) Do you think that this definition of "pot still or similar process" in these terms is regarded as practically settled for a number of years, or is it regarded as an experimental stage?—It is settled right enough. The only thing is that nothing has turned up that has come under my notice to interfere with its working.

12983. If experience showed that "similar process" required further definition than it at present has, have you got the machinery by which to alter it, or would you want a new Act?—I think a new Act would be required. The regulations under the Act may be wide enough to determine that point.

12984. (*Mr. Guillemard.*) To alter a rate of duty?—Not to alter a rate of duty, or define the words "similar process," but on the question whether it could be done, it is in an Act, and as to a Schedule to an Act I do not think a regulation could do it.

12985. (*Dr. G. S. Buchanan.*) In connection with the declaration of age of spirits that you have received from the United Kingdom, have you any reason to believe that that system has been abused in any way?—Not as yet. The position with regard to Australia is this. The declarations I suppose in the greater number of cases are perfectly true, but if it happens that a false declaration is found out, then, of course, they will require some other means, either by getting a certificate from the Excise or others, so as to have something above suspicion; if not the result would be that they would have to keep their spirits in bond in Melbourne in wood.

12986. At present you have no guarantee from the British Excise?—No, not from the British Excise.

12987. We have heard a good deal about the action of Western Australia in connection with spirits. Could you clear that up? Is there anything that any individual Colony can do over and above the Commonwealth with regard to spirits?—No. Whatever action Western Australia has taken must have been prior to the Federation.

12988. (*Dr. Bradford.*) Can you give me any information with reference to the statement in this Report that beyond all reasonable doubt raw spirits are injurious?—I can only say that my own private opinion is that I do not think raw spirits should be allowed to be given to the community to consume.

12989. It is, of course, a statement that we have had made to us on several occasions, but it has been rather difficult to obtain concrete evidence with respect to it?—My experience is that I would unhesitatingly prefer to drink whiskey four to five years old to one that has just come out of the still.

12990. You have nothing more than that to say?—No.

12991. (*Dr. G. S. Buchanan.*) Is there any published evidence that gives the facts on which that statement is based?—I have here the evidence of all the witnesses, and it is upon the statements made by the various witnesses that were examined in connection with this particular group of spirits that that statement is based. I will hand in the print of the evidence. (*The same was handed to the Commission.*)

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

TWENTY-FOURTH DAY,

Tuesday, July 7th, 1908.

At the Westminster Palace Hotel.

PRESENT :

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*)

L. N. GUILLEMARD, Esq., C.B.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. FREDERICK HENRY DUMAS MAN, called.

Mr. F. H. D. Man.

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12992. (*Dr. Bradford.*) What is your firm?—E. D. and F. Man, Colonial Brokers.

12993. That is a firm of old-standing, is it not?—It dates back to 1793.

12994. How long have you yourself been in business?—Twenty-nine years.

12995. What is the nature of your business?—We deal in Colonial produce—sugar, rum, cocas, etc. We have got from three-quarters to seven-eighths of the rum trade, and a small fraction of the sugar trade.

12996. Is your trade exclusively in Jamaica rum?—Not at all—any rum.

12997. But a large quantity of it is Jamaica rum?—A large quantity of it is Jamaica rum.

12998. How is that rum that you sell produced?—In various ways. The Jamaica rum is, I think, entirely made in a pot still. The rum from the other countries is chiefly patent still, but there is more than one patent still. There is the Coffey still and some other still.

12999. Are you speaking of rum produced from the other West Indian Islands?—Yes.

13000. In which islands, so far as your knowledge goes, is the patent still employed?—It is employed both in Demerara and Trinidad. Those are the two chief producing countries besides Jamaica.

13001. Have you any knowledge of a patent still being employed in some of the West Indian Islands?—Oh, yes. Trinidad uses nothing but a patent still.

13002. But other than Trinidad?—I think St. Kitts uses one, but I am not quite sure. We do not hear much about how it is made; we only have to test the quality.

13003. Is there much variation in the quality of Jamaica rum?—Tremendous.

13004. Could you give us some indication?—From 2s. 6d. a gallon; just now it is very high and ranges from 3s. up to 8s.

13005. That is for Jamaica rum itself?—Yes.

13006. From the Island of Jamaica?—Yes.

13007. How do you form an opinion of the value of the rum?—Simply by smell. We mix two parts of water to one of rum and compare it very carefully with other rums. The water brings out the flavours.

13008. You do not use any chemical analysis?—No.

13009. You are employed by the Admiralty, are you not?—Yes, we buy their rum.

13010. Do you buy all the rum for the Navy?—Yes, all.

13011. Has the consumption of rum varied very much of late years?—It has been steadily increasing lately.

13012. Can you give the Commission some information with reference to that?—I think it is nearly half a million gallons more last year than the year before.

13013. Can you give us any information as to the cause of that increase?—We put it down to various causes, one is the suspicion that has lately been cast on whiskey, and people are beginning to find out that rum is a very pure wholesome spirit.

13014. I suppose that increase is mainly an increase in Jamaica rum?—No, I should not say so. I should think it was more in the other sorts. I do not think Jamaica rum has increased materially. It has slightly.

13015. Do you mean by "the other sorts" the varieties produced by the patent still?—Yes, what we call proof rums. There are two sorts—Jamaica rum is one sort and then everything else is proof rum. Proof rum necessarily is sold by the proof gallon which varies according to strength.

13016. (*Chairman.*) Where is it manufactured?—Chiefly in other parts of the West Indies—Demerara and Trinidad, but also Cuba, Mauritius, St. Kitts, Barbados. Most of the sugar-cane growing countries produce rum.

13017. (*Dr. Bradford.*) Can you give us any information as to the rate of increase in the varieties of rum as compared with the increase in Jamaica rum?—No, it is very difficult. The Board of Trade returns do not distinguish.

13018. I gather from your *précis* that you regard rum as a very wholesome drink?—I have always believed so. I am told it is food as well as drink, and that if you take too much in the West Indies it does not have a bad effect, whereas if you take too much whiskey or brandy you are a dead man. That I hear from people who have lived out there all their lives.

13019. Then you make some remarks in your *précis* with regard to "low wines," and you say they should not be allowed to be exported from Jamaica. Are they exported as a matter of fact?—Yes, they are.

13020. Would you tell the Commission what these low wines are?—I am not a practical distiller in any way, but I believe it is the first running and the last running of a wash, and the result is most unsatisfactory.

13021. For what purpose are these low wines exported?—For sale in this country as Jamaica rum. To compete with the proper article they are sold at a lower price, and the tied house people, and those sorts of people, who want to put in the lowest priced articles, buy them.

13022. I understand that they come from Jamaica?—Yes.

13023. So your point is that a considerable quantity of inferior rum is exported?—It is a small quantity only—a few hundred puncheons a year are exported from Jamaica.

13024. You desire to see that stopped?—For the benefit of Jamaica I think it should be, because people who taste them and are told it is Jamaica rum would probably never touch Jamaica rum again.

13025. Then you state that a good deal of rum is fraudulently sold as Jamaica rum which is not Jamaica rum at all?—That is the supposition. The idea is to call everything Jamaica rum.

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13026. What rum have you in your mind as regards that statement?—What they call vatted rum, that is, mixtures of rum; for instance, Demerara and Mauritius are mixed together, one being an uncoloured rum and the other a heavily-coloured rum. They are brought down to a medium colour, and are sold as Jamaica rum in public-houses.

13027. Is this trade in inferior rum mainly a public-house trade?—I think nearly all the rum sold is sold through public-houses. There is very little bottling trade now; there is a little, but not much. May I add one or two things. I should like to say that rum is very heavily handicapped as against other spirits. It has to pay a freight to come over; a heavy loss of gauge in shaking about, heavy dock charges on landing, and then it is charged 4d. a gallon more duty than British spirits. There was a Commission appointed in 1897 of which Sir Edward Grey was a member, and he strongly advocated the abolition of this extra duty, but we cannot get it done.

13028. I am afraid that scarcely comes within our purview. It is a question of taxation?—I am afraid that is so.

13029. (*Dr. Cushny.*) What is the difference in flavour between the Demerara rum and the Jamaica rum?—It is very difficult to describe the difference in flavour, but anybody who knows it could see in a moment.

13030. The Demerara rum is distinctly inferior?—I would not like to say it is inferior, but it is a different style; it is more neutral and not so highly flavoured. It is generally considered inferior, and the price is inferior to Jamaica rum.

13031. How do you account for that difference?—I expect it is the soil and the different manufacture of the sugar. In Trinidad and Demerara they make a very superior sugar, and that means to say they take so much more stuff out that there is very little left for the rum, whereas in Jamaica they think more of the rum than the sugar.

13032. (*Mr. Guillemard.*) Do you sell rum that comes from other islands than Jamaica?—Yes.

13033. Did you hear Mr. Nolan's evidence yesterday?—No, I unfortunately was not here. I have read a little of it.

13034. Mr. Nolan recommended and pressed on the Commission that no rum coming from the West Indies should be allowed to be sold as rum unless it was made in the pot still?—That is Mr. Nolan's idea, I know.

13035. You are interested in the question generally. What would your view be about that?—I think that is ridiculous. Some rum made in patent stills is quite equal to some made in pot stills. To brand only one sort as rum and the other as something else is, to my mind, ridiculous.

13036. Do you think that would generally be the view of the people who are engaged in the trade of rum generally and not confined to Jamaica rum?—I am sure that that would be their view. We once supplied the Admiralty with Jamaica rum (they usually take Demerara and Trinidad) and the sailors did not like it so well.

13037. But you sell more Jamaica rum than anything else, do you not?—No, I do not think so. It varies according to the crop. Sometimes there is a big crop of Jamaica and sometimes a big crop of Demerara, but we sell the larger proportion of Jamaica rum, that is to say, of the crop we sell about three quarters, whereas of Demerara I do not suppose we sell half.

13038. You do not know which predominates?—What we call the proof rum, that is rum other than Jamaica.

13039. The bulk of the Navy rum, what is that?—That would be proof rum—not Jamaica.

13040. Proof rum, I take it, is an expression of your own over there?—A trade expression. It means to say that the rum is sold per proof gallon.

13041. (*Dr. Bradford.*) But that rum is largely patent still rum?—Chiefly patent still rum.

13042. (*Dr. Cushny.*) Do you sell any European rum, or is it all West Indian?—West Indian. There is no sugar-cane in Europe; there is a little in the South of Spain, I think, but I do not believe they make rum.

13043. We have heard of some European rum and nobody knows where it is sold. Have you ever heard of it?—No, I have never heard of European rum. The Customs only admit rum that comes from a country where cane is produced.

13044. (*Mr. Guillemard.*) As rum?—Yes. They allow, most improperly, we think, stuff called imitation rum which is potato spirit flavoured and coloured, but they only allow it as imitation rum.

13045. (*Dr. Cushny.*) What becomes of it?—I am afraid it is mixed with the real stuff after the duty has been paid.

13046. (*Mr. Guillemard.*) It is not a very big amount?—No, very small, and it is chiefly in Bristol.

13047. Before I leave that question which I was asking you, I find Mr. Nolan states this in his evidence: "I do not think rum could be produced except in a pot still, as the patent still produces only a silent spirit which has little of the characteristics of any of the three named spirits." You would totally disagree with that?—Quite so.

13048. (*Chairman.*) What is rum composed of?—It is the molasses extracted after they have made the sugar, fermented and distilled. It is the residue of sugar.

13049. With the exception of this imitation rum is there any adulteration of rum?—No, I think not.

13050. There is nothing that comes over here that would be injurious to health except so far as rum may be injurious to health generally, but there is nothing injurious as a result of the materials used?—I believe at certain times when the price of rum is high a large quantity of other spirit is mixed with it after duty has been paid. They cannot do it before because the Customs are much too strict.

13051-2. (*Dr. G. S. Buchanan.*) Is the Demerara rum or the West Indian rum saleable by itself, and is it sold by itself in large quantities?—Yes, but we do not know how it ultimately gets consumed. We sell it as it arrives.

13053. It does not get blended with Jamaica rum?—No, Jamaica rum is very seldom blended with anything else.

13054. Could you tell me what pineapple rum is?—Pineapple rum is a rum having a pineapple flavour produced not artificially in any way, but by the soil. There are certain soils in Jamaica which produce a rum that is known as pineapple rum. It has a flavour of pineapple.

13055. The pineapple flavour comes from a variety of molasses?—Yes, it is caused by some growth of the cane. Nobody knows exactly how it is produced.

13056. (*Chairman.*) The Commission are very much obliged to you for your evidence.

The witness withdrew.

Mr. HENRY HERBERT GORDON CLARK, called.

Mr. H. H. G. Clark.

13057. (*Chairman.*) Are you the senior partner of the firm of Matthew, Clark and Sons, of 6 and 7, Great Tower Street, London, E.C.?—Yes.

13058. Your firm has been in existence for ninety years?—Yes.

13059. You have been sole agents for the very large firm of De Kuyper and Son?—Yes.

13060. What do they import?—They ship Hollands Geneva to this country, or Hollands gin as it is called.

13061. That is Hollands gin or Geneva?—Yes, the name is alternative. Gin is a variation of Geneva.

13062. They ship from Rotterdam?—Yes.

13063. Have you anything to say first as to the difference between these spirits and the spirits of home manufacture?—There is very little difference in the process of manufacture. There is some difference in the materials because in Holland they use a certain amount of rye grain in their mash which gives a different flavour, and there is a certain difference in the flavourings which they put into it. The result is that the flavour is very distinct, but with regard to the spirit itself there is not a great deal of difference in it.

13064. Do you think it is possible to restrict the materials out of which Hollands or Geneva should be made?—No, I do not think it would be very easily done. We should be perfectly prepared to agree to restrict to corn, but I do not know that it would be easily done because I do not think they have sufficient organisation in Holland to deal with the matter.

13065. What is the Hollands or Geneva made out of?—A mixed mash of malted barley, rye, and maize, and in the proportion of about 34 per cent. of malted barley and about 34 per cent. of rye, and about 32 per cent. of maize. That is then distilled in pot stills and re-distilled twice again; the result is a spirit which they call Moutwyn or malt wine, which is then re-distilled again and the flavourings added, so that it has undergone four processes of distillation before it reaches the public.

13066. As far as you know are those ingredients that you have mentioned the composition of Hollands both abroad and in this country?—No, I do not know that they are the same in this country. I have nothing to do with English gin, but I believe in this country they do not use rye for English gin.

13067. Gin is, of course, well known as a British product?—Yes.

13068. Do you think that in the foreign gin, Geneva and Hollands, and in the English production, there is any adulteration going on?—No, I should say not. You mean with regard to what comes to this country?

13069. Yes?—With regard to what comes to this country I should say not. I should say there is a different quality of spirit used by different manufacturers in Holland, but no adulteration. It is all rectified spirit.

13070. With regard to the home production do you know enough to say that it is the same?—No, I do not.

13071. Can you conceive any way in which there can be a distinctive mark as to the quality and character of gin when sold?—No, I do not. Hollands gin—no. I think it would be very difficult.

13072. What regulates the trade? Is it the taste of the consumer?—Yes.

13073. That, you think, is a sufficient check?—Yes, I do.

13074. With regard to the keeping of gin, does gin improve by being kept in cask or bottle?—No, it does not improve either in cask or bottle. If you keep it a very long time in bottle it may become a little softer perhaps, but practically it does not change, but as to keeping it in cask it positively deteriorates after being kept in casks for some few months.

13075. Taking quite new gin, is there any undue strength about it so as to be injurious to health?—None whatever. Quite new gin is in perfection.

13076. I believe in the two year certificate required in Australia gin is omitted?—It was not omitted at first, but they found it necessary to omit it afterwards.

13077. Is Hollands gin a cheaper spirit than the ordinary English gin? You say in your *précis*, "Hollands gin is a cheap spirit"?—It is a cheaper spirit than whiskey or brandy. I do not know that it is a cheaper spirit than English gin, but you can go and buy a bottle of De Kuyper's at the Stores for 2s. 6d.

13078. Is that too cheap?—I do not say it is too cheap. It is cut pretty fine at Store prices, but you may take it from 2s. 6d. to 2s. 8d. is about the price at which it can be bought, therefore I call it a poor man's spirit mainly.

13079. What comparison has that to the price of an ordinary class of whiskey? How much a bottle would the whiskey be—3s. 6d.?—I am not a whiskey man, so would rather not answer that.

13080. Your view is that any age restrictions put on gin would be out of place?—I am decidedly of that opinion.

13081. (*Dr. G. S. Buchanan.*) In making Hollands gin you told us you had practically a third of malted barley and a third of rye and a third of maize—putting it quite roughly?—Yes.

13082. Is that the sole raw material for the spirit, or do you use any other?—That is the sole raw material which Messrs. De Kuyper employ.

13083. You distil and re-distil, I understand, in pot stills?—Yes. I should say that Messrs. De Kuyper do not make the Moutwyn themselves, and none of the Hollands gin distillers do. They may have one or two malteries, as they call them, but a very small amount. This spirit is made in Schiedam in the main, and is made in small pot stills, and Messrs. De Kuyper buy it through brokers from those pot stills. The standard that satisfies them is the standard which I have given you with regard to the proportions of grain.

13084. Do they insist then on knowing what are the ingredients that are used in the small pot stills from which they purchase?—No, they do not insist on a certificate, but they know what the proportion is, and they know of any variation. They can detect it at once by taste or smell, and once there is a slight variation they do not deal with that distillery again. That is well known.

13085. Having got the product of the small pot stills, do Messrs. De Kuyper again distil?—They do.

13086. They mix and distil themselves?—They re-distil with the flavourings of juniper and whatever flavourings they have. Each one has his own. I do not know exactly what the flavourings are.

13087. Is it, as a matter of fact, an important point that the spirit should have its origin in this way from corn, and with a large proportion of malt? Does it make any difference?—I think it makes all the difference in the flavours. I should not consider that it was good Geneva unless it was made all from grain and with a certain proportion of malt.

13088. Is your view, or can you say as a fact, that if you took a spirit that has a fairly high degree of rectification, no matter from what its origin, and then distilled that with your juniper and flavouring essences, that you would not get a good product?—You would not get as good a quality gin—certainly not. You would get what would be called Geneva, but you would not get as good a quality.

13089. I take it that some of the produce we get from Holland is of that nature?—I believe that most, if not all, that comes to this country is properly made, although I cannot answer for the proportions in which it is made except with regard to Messrs. De Kuyper, but I believe there is a good deal of the cheaper gin made from other rectified spirits from other sources than grain which goes to other countries.

13090. Does the Dutch Government, or do the manufacturers themselves institute any sort of control in Holland over the description of the various kinds of Hollands or Geneva?—No, I believe there is no Government control, and there is no manufacturers' association for that purpose.

13091. Is there any municipal control?—No, I believe not. I think there was municipal control some years ago in Schiedam, but it was not found to work satisfactorily, and I believe it was abandoned, but I am speaking from hearsay and not from knowledge.

13092. Some papers were sent to the Commission about six months ago giving in some detail an account of the system and control in Schiedam?—I had heard of it, but I was informed that it no longer existed, although I would not like to put that forward as a fact.

13093. You are aware of the great elaboration with which some Dutch traders notably in connection with butter have established a system of voluntary control between themselves for the prevention of adulteration and for the protection of Dutch butter?—Yes.

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13094. There is nothing of that kind at present in connection with spirits?—Nothing.

13095. Do I understand you to think that a distinction should be made in this country between Hollands gin and English gin?—They are distinct articles in the finished state, but you mean a distinction as regards what?

13096. In the matter of the declaration to the purchaser and in the matter of sale?—No, there is no necessity whatever. The purchaser knows very well what he is buying, and no man could drink Hollands gin and think he was drinking English gin or *vice versâ*.

13097. The things are so distinct?—So absolutely distinct. If you go to Ireland and ask for "gin" they will give you Hollands gin because it is the gin of their country rather than English gin. If you go to a public-house in England and ask for "gin" they will give you English gin. You have to ask for Hollands if you want Hollands gin, but no man can possibly mistake the two. The flavours are entirely and utterly distinct.

13098. Does that apply to all gin which comes from Holland?—Yes, I have never seen Hollands gin which you can mistake for English gin.

13099. You were telling us that you could get your Hollands gin at 2s. 6d. a bottle. Can you tell us what volume of spirit and what alcoholic strength that would represent?—That represents about 17 under proof in strength. It is put up in cases of just under two gallons. I would not say there is one-sixth of a gallon in a bottle, but it is just under so as not to exceed it. 1·96 is near enough to take it.

13100. Can you tell us whether the practice over here is for Geneva gin to be sold from the original bottle in which it is imported?—Yes, by far the largest quantity is sold so.

13101. Is it on tap at all in the public-houses?—Yes, it is. It is imported in cask and in bottle; by very far the largest proportion is imported in bottle. As a matter of fact by far the largest proportion is of Messrs. De Kuyper's brand, but the importation in bulk is comparatively small. I remember in 1899, when the surtax was placed on foreign bottled spirits, the proportion of Messrs. De Kuyper's trade was 1 to 11, ten times as much in bottle as there was in the cask, and if you kept a cask over six months in bond it was apt to become rather unsaleable.

13102. The last sentence of your *précis* says: "(2) By manufacturer's declarations officially attested." I do not quite understand what that relates to?—It relates to the last question in the terms of reference as to how it should be done.

13103. With regard to checking the accuracy of description?—Yes. If you are going to put any restrictions as regards what the stuff is made from how is it to be done? The only way to do it is by taking the manufacturer's declaration and having it officially attested in Holland just as Australia accepts the manufacturers' declaration officially attested in Cognac for the brandies that come over.

13104. Our experience of the Dutch trade is that where there are any official requirements in countries with which they trade the authorities or the traders are ready to provide some means of control, or at all events, some sections of the trade are, which would meet it?—Yes.

13105. (*Dr. Cushny.*) The gin, I understand, is distilled once after the flavouring ingredients have been added?—Yes.

13106. What still is it distilled in?—A pot still—a form of pot still. I am not an expert distiller, but I can tell you it is a form of pot still and they vary.

13107. Do you lay some stress on the fact that it is a pot still that all the distillations take place in?—Yes.

13108. Even although maize is used?—Yes, that is so. They cannot make very much at a time; it is a very slow process.

13109. Why should not they use a patent still to make the original spirit before you come to gin at all?—Because I think you would lose a considerable amount of the distinctive flavourings that Hollands Geneva has. If you look at the spirit before it is put into the still for the last time with the juniper and other herbs, you will find it has already a very distinctive flavouring of its own not unlike the flavouring of the finished article.

13110. But that is rectified spirit that you are talking of?—Yes, but in that process of rectification it has not lost all its flavouring. It is not pure alcohol simply.

13111. I remember when we were discussing the pot still with regard to whiskey that the Scotch distillers said they could not make whiskey from maize in a pot still. They could not use the pot still if they added maize because the flavour was so strong. My difficulty is you cannot get anything like near rectified spirit if you use maize. You must have a strong maize flavour in your rectified spirit before you add your juniper?—Yes, I think you keep a good deal of the flavours, but this has been three times through the still and it goes through a fourth time. So far as any impurities of the maize are concerned you get rid of it in four distillations, but as regards the flavours we use maize because we want a certain amount of that maize flavour.

13112. You could not make gin without maize?—No, I do not think you could—not to make the finest quality of Geneva.

13113. Of course, Irish whiskey also is distilled three times practically, and yet the Irish distiller says he cannot use maize in the pot still?—He does not want that flavour. Anyone who knows what the flavour of Hollands Geneva is can readily see there is a certain amount of maize flavour about it. It is necessary.

13114. Has it always been made from maize?—Yes.

13115. How old is Hollands?—I should not like to say, but it is a very old spirit.

13116. It could not have been made from maize originally?—No, I suppose not.

13117. It has only been made from maize within the last half century probably?—That I do not know. All I can tell you is they use maize now and have done for many years.

13118. (*Mr. Guillemard.*) May I interpose to say that I have here the report of the Select Committee on Distillery Laws in 1799. I do not suppose you know the book because it was rather dug out for this Commission, but on page 308 there is a statement about the materials, and the materials then were not quite what you say they are now. The Geneva manufactured then was rye together with a third or a quarter of barley malt. Maize was not in it. It has come in since 1799?—Yes. I suppose they could not get maize in those days.

13119. (*Dr. Cushny.*) Is maize universally used now?—I cannot answer for it being universally used, but it is universally used for the highest quality of Moutwyn to make the best kind of Geneva.

13120. Would you refuse the name of Hollands if maize were not used?—No, I do not say that. Hollands means Dutch gin, and you can make gin without maize. I am telling you what those who make the best gin think is necessary for it.

13121. How do you add the juniper flavour? Do you add the juniper berries or the juniper oils?—I am not an expert in that, but I believe I can state confidently that they add the berries.

13122. In all Hollands gin?—No, I cannot say in all Hollands gin, but I know they do in De Kuyper's, who, after all, have a very large proportion of the trade. I have had the berries myself.

13123. What else is there in it, can you tell us?—No, I cannot. Each distiller has his own receipt, and I suppose nothing would drag from him exactly what he puts in because it might be copied by others. I cannot tell you what else there is.

13124. But juniper certainly is essential?—Yes, juniper always.

13125. You would not agree with the definition of gin that gin is rectified spirit distilled off turpentine?—No, I do not think it is.

13126. I think I have seen this definition given?—I am not aware of that.

13127. (*Mr. Guillemard.*) I am very much struck with the great difference in your opinion of the two spirits. The foreign made Geneva and the British made gin are such absolutely different spirits?—In flavour.

13128. I was looking to see if we could get the reasons for that. I suppose the first reason for the difference is the difference in the still. Do you think there is anything in that?—Yes, I think there is a great deal in that.

13129. In the foreign made spirit all the distillation is made in what is practically a pot still of one sort or another?—Yes, but I am not conversant as to how the English distil it.

13130. In England you may take it that the pot still is not universally employed anyhow. You can take it as very much the opposite?—I do not think it is universally employed in Holland, but according to my knowledge it is usually employed.

13131. You may take it in England it is nearly all patent still. That is one distinction. Then perhaps the second distinction you would agree to is that in the foreign made article the whole mash is fermented together?—The different grains.

13132. That is done in the foreign made gin, and the whole mash is fermented together?—Yes.

13133. That is not the case in the English patent. Do you think that would account for the difference in flavour?—I would rather limit myself, not being an expert, to saying that the whole mash is fermented together in foreign gin.

13134. Then in the third case, you come to materials. As we have seen in 1799 the foreign made article seems to have been made from rye and barley. Now it seems to have got, from your account, to malt, rye, and maize?—Malted barley, rye, and maize.

13135. Roughly in equal proportions?—In more or less equal proportions.

13136. The English, I think, you may take it, is roughly speaking more like this: 75 maize, 15 malt, and 10 rye?—Yes.

13137. Do you think that would account for a good deal of difference?—Yes, it certainly would, especially bearing in mind the fact that the resultant spirit has a very distinct Geneva flavour of its own. It is not at all like the English highly rectified London grain or anything of that sort.

13138. Your opinion really comes to this, that the foreign and the British are two distinct articles made from different proportions of the same materials?—I think they are very different in the London article, and they have differences in their process of manufacture and material, but there is one very broad line in which you cannot separate the two. They are made from grain and from grain only, and they are flavoured with juniper, and the result is there is very little difference. You could not mete out to the one certain restrictions and not to the other.

13139. You could not regard them as differing like brandy and whiskey?—No, certainly not.

13140. With regard to the public health, in your opinion, is there any difference in the effects on health of the foreign as compared with the other?—No, I think the effect is simply a difference in flavour. I should think the effects on health are very much the same; the good effects or the prejudicial effects of taking too much are about the same.

13141. I gather you sell your spirit quite new?—Yes.

13142. What name do you sell it under?—It is rather curious. It is called Hollands Geneva, and the label has the words "Genuine Hollands Geneva." The trade call it Hollands or Geneva or gin, and the public call it Hollands, but in Ireland they call it gin, and in some parts of the country they call it Geneva.

13143. The man in the street when he wants to buy a glass would use the word Hollands or Geneva?—Yes, he would say a glass of Hollands. He would never say a glass of gin unless in Ireland, and in Ireland I believe if you ask for a glass of gin you would expect to get Hollands.

13144. Where do you say they would ask for a glass of Geneva?—It is so very seldom. I should think they would say a glass of Hollands as a rule, but the biggest word on the label is Geneva. *Mr. H. H. G. Clark.* 7 July 1908.

13145. (*Dr. G. S. Buchanan.*) Do we get what is represented as Geneva from any other country besides Holland?—Yes, I believe there is some made in Antwerp—in Belgium.

13146. Do we get any from Germany?—I do not know for a certainty. I should think it is quite likely, but I do not know it.

13147. There would be no administrative objection under present conditions if the exporter from Hamburg, for instance, of German made Hollands called it Hollands?—I should object very strongly because "Hollands" means Dutch manufacture. I do not think the Belgian production ought to be called Hollands.

13148. But it is as a matter of fact?—Yes, but I do not think it comes much to this country. I know it goes abroad where it is known as gin.

13149. It could be called Geneva from whatever country it came?—Yes. Geneva is simply a corruption of the Dutch word Jenever, meaning juniper, or genièvre, the French word for juniper.

13150. Whatever other flavours are used in the still juniper is universal?—Yes, that is essential.

13151. Do you know enough about other flavours to say whether any drug or herb is used that has any pronounced medical effect as a drug?—I do not know enough about it to say anything. I do not believe that there is, but I really do not know what they put in at all except juniper. I should like to say before I leave the chair that you see advertised for sale sometimes "Old Geneva" and "Very Old Geneva." My evidence all goes to show that Geneva deteriorates in cask or bottle with age, and I wish to state this, that old Geneva is in my opinion no longer a gin, it is a liqueur, and it has a large proportion of sugar in it. We pride ourselves in gin on having no oils, no sugar, no sweetening, and if you look at the landing accounts of Geneva you will find there is no column even for "Obscuration," which means no sugar, but if you look at the landing accounts of old Geneva you find "Obscuration 3.5."

13152. (*Chairman.*) When you say a liqueur you mean prepared as a liqueur and as distinguished from the ordinary gin?—Yes.

13153. By means of sugar being put in?—I do not know what is the sweetening, but by means of some sweetening being put into it. If any witness should say "Well, there is such a thing as old Geneva which fetches a high price," it does not come into competition because it is not the same article as the gin we are speaking of.

13154. (*Mr. Guillemard.*) It is a compound really?—It is a compound really.

13155. (*Chairman.*) And I suppose you would think not so healthy a compound as the real gin?—I would pass no opinion. I should say you could not give it to a gouty man. One of our great advantages is that there is no sugar in the gin; it is practically dry. I should also like to state that in evidence given the other day by a whiskey witness he admitted gin was very wholesome, and he suggested that whiskey might be allowed a certain remission of taxation because it would have to be kept two years in bond, whereas gin would be deteriorated by being kept two years in bond. I should like to say very strongly that gin is a perfectly wholesome article, and has perfected itself when new, whereas with regard to whiskey, if you find it necessary to keep it two years in bond until it is a better article it has no right to that remission of taxation because it has not perfected itself, and it would be very hard on gin.

(*Chairman.*) You are now going into the ethics of taxation and we cannot go into that. We have to thank you for the evidence you have given to us.

The witness withdrew.

Mr. D. Burnett.

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Mr. D. BURNETT, called.

13156. (*Mr. Guillemard.*) Will you tell the Commission what your business is?—We are rectifiers, brandy and whiskey merchants, wine merchants and vinegar merchants.

13157. What is your trade name?—Sir Robert Burnett and Co.

13158. Do you deal entirely with gin produced in this country, or do you have any trade from abroad as well?—We sell Hollands occasionally, but we produce gin in this country, English gin—London gin.

13159. That is your main trade?—Yes.

13160. I suppose you only sell the Hollands when any customer of yours wants it and asks for it?—Yes. We may possibly use it for "topping up" on special gins, but not on our own—nothing which goes by our own brand.

13161. What is "topping up?"—Giving a special final flavour.

13162. And a mixture?—There are occasions on which the customer may desire to have a special gin of his own unlike other people. We may and we do on occasions use Hollands for that purpose.

13163. You put a little Hollands in?—Yes.

13164. You do not do that in bond?—No. It is a very small thing.

13165. What is your idea of the proper definition of gin, looking at these methods of production? How would you describe "gin?"—I should describe it very shortly as a potable spirit produced by distillation from corn and flavoured with juniper and other herbs.

13166. Would you like to amplify the word "corn" or would you leave it at that?—Corn or grain—it is immaterial.

13167. You do not wish to specify the various cereals?—I do not think there is any necessity as long as it is grain.

13168. Apart from maize and malt and rye, what are the main materials used?—I think you have covered them all. The object of specifying "corn" is that you wish to keep out molasses and cane.

13169. Do you wish to define corn by saying what is excluded? You want to exclude molasses?—Yes.

13170. Would you include rice?—I do not think I should call rice corn.

13171. Do you see any objection to the use of rice?—I do not think it is corn, and I think it is well to keep to corn.

13172. What is at the back of your head when you say you want to keep the production to corn? Is it the character of the product?—It is a British spirit produced from corn.

13173. British spirit?—English gin.

13174. Materials grown in England or growable in England?—Yes, it is an English drink, or greatly so.

13175. In your view is it desirable to place any further restrictions on materials and processes of manufacture as compared with the present?—No, I think, certainly not—excepting as regards the use of corn.

13176. And with regard to the declarations your view is that neither as to materials or processes of manufacture, or proportions or age, would it be advisable to have any compulsory declarations?—I do not see that they are required.

13177. Would you like to amplify your views on that at all?—If you have any question you want me to answer I shall be very pleased to answer it to the best of my ability.

13178. I was putting it the other way. Your answer is sufficient from my point of view, but I do not know whether you would wish to add anything further?—No, I think that covers everything.

13179. I think you agree with the other witnesses we have heard this morning that anything like a minimum period for bonding would be useless?—It is absolutely unnecessary, and it would be very hard.

13180. Would you go so far as the last witness and say that it would in your opinion positively do the gin harm?—Yes, if you keep gin in cask it is very apt to take colour.

13181. It would amount to this, if made compulsory for gin, that traders would be compelled to keep a thing at their own cost in bond while it was deteriorating?—Yes, in order to spoil it.

13182. Then to come to the spirit imported into the United Kingdom, that, I take it, is the Hollands. Do you hold the same views about that?—Yes—as regards keeping, you mean?

13183. Yes?—Oh yes, certainly. I quite agree with Mr. Clark's views on that.

13184. With regard to rum, I think you do not wish to give any evidence?—To use a simile, as a vinegar maker, if a pickler were asked to lay down the law as to what vinegar should be, I, as a vinegar maker, or my firm as vinegar makers, would think that the wrong man was asked to do it.

13185. (*Dr. Bradford.*) In the distillation of gin do you think it is material what kind of still is used?—You could not make gin entirely from a pot still.

13186. It is sometimes made in a pot still, is it not?—I think you would have a very long, laborious process. You could make it as they have made Hollands, no doubt, and you would get gin eventually by repeated distillations. You would make gin, but I do not say you would make good gin.

13187. Your view is that it should be made in a patent still?—If you want to get gin clean. The gist of the whole of the evidence, I think, that has been given before the Commission is, that the pot still retains all the aroma and flavour of the raw material first used and the things which you do not wish to have as well.

13188. (*Dr. Cushny.*) I do not understand why you require corn for gin?—Gin has always been recognised as a corn drink, and we certainly do not think it is desirable to bring in cane.

13189. How long has it been recognised as a maize drink?—Long before I came into the trade, many—many years.

13190. Before that there was no maize used?—I could not give you the date, but I should say very much about the same time when maize was used in Holland maize was first used in this country, but I am not speaking from knowledge. It has been used for many—many years.

13191. There is no difference in flavour between the rectified spirit from corn and the rectified spirit from cane?—I know nothing about the rectified spirit from cane.

13192. Has the rectified spirit that you use for gin any flavour at all except alcohol?—The cleaner you can get it the better. Molasses spirit, I believe, is always recognised as what is used for industrial spirit.

13193. What do you add to the spirit to make gin? What are the constituents of gin?—Juniper and other flavouring herbs.

13194. Could you tell us any of those or should you object to do so?—I think it is rather hard to ask one.

13195. It is a trade secret?—There are other rectifiers in the room, personal friends, and it is undesirable to go into these details.

13196. How is it added in English gin?—By distillation from the berry.

13197. Is the berry added to the alcohol, or is the oil added?—It should be worked from the berries with the spirit.

13198. And then distilled off that?—Yes.

13199. Do you know whether it is made in this country from juniper oils or juniper spirit?—They tell us so, and we have every reason to believe so.

13200. You object to that being called "gin," I suppose?—I suppose you could hardly go so far as to say it is not gin, but it will not be good gin.

13201. It is not the historical method of making gin?—No.

13202. (*Dr. G. S. Buchanan.*) In hearing evidence about whiskey we had a large amount of evidence from a large number of people to the effect that

whiskey should be the product in any still of a distillation of a mash from corn. I gather that your contention is that the raw materials from which gin is made should invariably be whiskey in that sense?—Yes, I think one may put it in that way.

13203. With regard to molasses, are molasses used now for making gin?—We fear so, but I do not know of any instance.

13204. If molasses are used do you think that any distinction ought to be made in the description of the gin? Do you think that the fact that it has been prepared from molasses ought in any way to be declared or made known to the trade or the public?—I will not go so far as to say it is necessary, but there would be no harm if you did require either a declaration or different coloured permits for molasses spirit and corn spirit.

13205. Do you think it would be any advantage to what I may call fair trading if the origin of a gin from molasses was declared?—Yes, I should say it would.

13206. It makes a difference as regards both price and quality I presume?—I should say so.

13207. Would the fact of molasses being used for the preparation of gin or for the preparation of the spirit from which gin is made in all cases be necessarily known to the Excise?—I believe so as things stand at present.

13208. As a rectifier, if you used molasses spirit for making into gin, would the Excise necessarily know?—Certainly, I take it so. I understand that the Excise watch very closely what is the production of corn and what is the production of molasses in the distilleries where both kinds of spirits are produced.

13209. But if you take duty paid molasses spirit to use for gin making for rectifying, would the Excise necessarily know that?—Yes, they would know where it came from. They would know how it was permitted in. May I say I understand the Inland Revenue are aware of that from the inside of the raw distilleries where the molasses spirit and where the grain spirit goes to.

13210. Can you give us any indication about the cheaper varieties of gin? What are they?—That is rather an invidious question, to ask one rectifier to name who are the worst members of the trade.

13211. I do not ask you to say that, but I ask you to say what I suppose must be common knowledge among the better class rectifiers as to what is the composition of the cheapest and poorest varieties of gin. What is your belief? You can tell us that without giving names?—My belief is that it is a spirit flavoured with oils without any rectification whatever.

13212. Without rectification—that is what I want to ask?—That is belief and it is not evidence.

13213. Would you hold that belief rather more with regard to what is exported as gin than with regard to what is sold in this country?—Yes, from the price that gin comes into foreign countries.

13214. That may be very low?—It is very low.

13215. Can you give us an example of the price?—I have heard of it at a very great deal less than it costs us to make real gin. I am bad at figures, and I may be 3d. or 6d. a gallon wrong.

13216. (*Chairman.*) What do you think that very cheap gin is made of?—Raw spirit flavoured with essences of juniper and other herbs.

13217. And bad for health?—I will not go so far as to say that unless the spirit is bad.

13218. (*Dr. G. S. Buchanan.*) It would be practically the same spirit. Is it an ordinary patent still grain spirit unrectified?—Yes.

13219. That is your belief about it?—Yes.

13220. What sort of degree of rectification would you consider as satisfactory in a spirit used for gin? What degree would you take?—Absolutely clean.

13221. Can that be defined in any terms chemical or otherwise?—It is difficult to define, but I should say absolutely clean. There should be no smell or taste of any impurities. If there is any of that left you ruin your gin. Having got your spirit clean you do not do any good (this is a matter of opinion) by carrying rectification so far as to take what is known as all the "guts" out of the spirit.

13222. There are impurities which you object to and "guts" which you desire?—Precisely, in our opinion, otherwise you would have a gin which has nothing in the mouth.

13223. That is quite apart from the flavourings that you add?—Yes.

13224. Do you happen to know if anyone has worked at the chemistry of the spirits when rectified to know what there is in the way of bye-products chemically?—You get rid of all fusel oil and all the usual impurities.

13225. My point is whether there was any well recognised chemist who had studied these gins from the point of view of finding out what the impurities were and so forth, and whether you could refer the Commission to any authority that they could look up on that matter?—I do not know that I am sufficient chemist myself to give you very good advice on that.

13226. You are a vinegar maker also?—Yes.

13227. With regard to the description of vinegar are you satisfied with the present position now of vinegar as regards one class and another?—I think it is a very great improvement on things as they were, but as we informed Dr. Hamill's representative, we did not entirely agree.

13228. Apart from Dr. Hamill's recent recommendations to the Local Government Board, would you consider that the state of affairs in respect of vinegar description which he investigated before those recommendations were made was satisfactory?—It was very unsatisfactory before.

13229. That leads me to this, that with regard to vinegar your experience is that you would like official definitions of some kind?—Dr. Hamill has practically given it.

13230 You think they are better than nothing?—Oh, yes.

13231. In fact, I understood you to support them generally?—Generally speaking. I do not know that it is necessary to trouble the Commission with the details, but I should be very pleased to tell you privately.

13232. (*Chairman.*) Did you ever hear historically of a certain gin called "Jigger" gin?—No, I cannot recall it. I may have heard of it, but I have forgotten it. It does not come back to me.

13233. It was supposed to be most deadly and it was largely consumed in the East End of London, but it has gone out of use to a certain extent?—Perhaps I ought to have heard of it, but I am afraid I have not.

(*Chairman.*) We are much obliged to you for the evidence you have given to the Commission.

The witness withdrew.

Mr. F. J. Kelly, called.

13234. (*Dr. Cushny.*) I understand you represent the firm of Messrs. Booth?—Yes.

13235. They are rectifiers and compounders?—Yes.

13236. Do they carry on business in London?—Yes, at 55, Cowcross Street.

13237. It is a very old firm?—A very old firm.

13238. Do you know when it was founded?—We take our date from 1740; we have records of where they were fined in that distillery in 1736, but we cannot go back further than that. I think the present continuous firm was founded in 1740.

13239. What is your definition of "gin"?—Gin I define as a spirit distilled from corn doubly rectified and then flavoured by distillation with juniper berries and other herbs.

13240. By "corn" you include maize and rye, I suppose?—Yes.

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13241. Would you desire any particular relative quantities of malt and maize or would you say any malt and maize?—Any corn.

13242. You refuse molasses?—Yes, molasses or vegetable spirit, or anything of that sort.

13243. Do you think that the spirit that you use before you supply the juniper berries, your rectified spirit, is alcohol or has it some flavour?—We consider it has a certain amount of flavour.

13244. Do you wish that flavour?—No, we take that out. We get a perfectly clean spirit.

13245. You reduce it practically to alcohol and water?—Yes.

13246. Could you not do the same to molasses spirit?—No, I do not think you could.

13247. You cannot get rid of all the flavours?—No.

13248. If you could would there be any objection to using it?—No, not if it was perfectly clean.

13249. You add juniper berries and other herbs and then distil it?—Yes, we distil the juniper berries and other flavourings which are secret to the different rectifiers at the same time as we are rectifying the spirit, and then we blend them together. But we do not use oil of juniper or other chemicals of any sort.

13250. You use the actual berries?—Yes.

13251. Do you know whether they use oils in this country?—I do not know for certain, but I have a shrewd suspicion that it is so.

13252. Is that cheaper?—It should be cheaper.

13253. What is your opinion with regard to the bonding and the keeping of gin?—We have always kept our spirit for some time before rectification.

13254. What is the object of doing that?—We think it improves it very much.

13255. Do you mean in flavours?—After flavouring we have never cared to send it out what we call red hot, but we do not think it improves to keep it for any length of time.

13256. After you have added the juniper?—Yes.

13257. Do you think it improves in flavour by keeping before you make the gin?—We think the spirit improves.

13258. Do you think it improves in flavour?—No, not in flavour. We think the actual spirit improves by keeping.

13259. It comes nearer alcohol?—Yes.

13260. It becomes cleaner?—It becomes cleaner and more ready to rectify.

13261. You state in your *précis* that Messrs. Booths some years ago experimented by bonding gin?—Yes, we thought we would see whether the gin improved by bonding. What we find is that we have to rectify it again. It brings a very beautiful spirit by that bonding.

13262. You have to rectify it after bonding?—Yes, we find we get a beautiful spirit from that.

13263. Has it lost the flavour or gained a flavour?—We have to flavour it again with the juniper. We have both processes. It is quite an experiment, but we think we have got a very fine gin from it. It is not our standard article.

13264. Would you mind repeating your special process again?—We made our gin instead of keeping the spirit before rectification, and bonded it unsweetened, dry, so that we could clear it again, and then we kept it for years in bond, and then when we have taken it out again we have rectified it again to get the colour out and flavour it again so as to get the age as well as the rectification.

13265. And do you think it paid?—No. We got a very fine gin, but we do not think it paid us.

13266. What was the extra expense?—I cannot tell you roughly.

13267. (*Mr. Guillemard.*) Was it serious?—3s. or 4s. a dozen.

13268. (*Dr. Cushny.*) Then you wish to make some remarks about clause 69 of the Spirits Act?—Yes. I understand there is some talk of repealing that Clause 69.

13269. (*Chairman.*) What is Clause 69?—It deals with sweetening and colouring in warehouse. We do a very large export trade in Old Tom gin, which is sweetened, and also in British cordials.

13270. Does that refer to gin only or to all spirits?—It says "distillers or rectifiers may in accordance with the prescribed regulations on giving proper notice to the Customs add any sweetening or colouring matter or any other ingredients to any spirits warehoused by them."

13271. "Any spirits"—it is general?—Yes. Then later on Section 74 says that to which that has been done shall not be cleared for home consumption. We do not want it to be cleared for home consumption, but we should not like Clause 69 repealed because it would interfere with our export trade and be a very serious loss to us, and, therefore, in my *précis* of evidence I say that if the whiskey people really required that clause repealed I should petition that their names as distillers should be struck out and allow the rectifiers and compounders to still have the clause.

13272. (*Dr. Cushny.*) What do you add in bond? Do you add sugar?—Sweets and fruit.

13273. You add fruit, too?—Yes.

13274. That is a compound spirit?—Yes.

13275. (*Dr. G. S. Buchanan.*) Your definition of "gin" is a spirit distilled from corn doubly rectified?—Yes.

13276. Do you regard that double rectification as essential?—I do.

13277. Would you say that it is done universally?—No.

13278. Do you know of gin that is not rectified at all?—I do not know of any. I hear of a lot of the cheap gin which I presume is not rectified, but I do not know of my own knowledge.

13279. In your export trade I take it you come into competition with cheap kinds of gin, do you not?—Yes.

13280. Have you had them tested or analysed?—No. I have tasted them, but I have never had them tested or analysed.

13281. Do they have more pungency or anything which suggests their being new grain spirit?—The flavourings are so pronounced that you could not taste anything about the spirit. The spirit is disguised with oil of turpentine, or something of that sort. You cannot tell what the spirit is, it kills it.

13282. Do you think it in any way advisable in the interests of the consumers that the spirits made in that way should be distinguished from spirits made in the way that you have described to us?—I should welcome it, certainly. I think it would be very much to the advantage of the consumer.

13283. The main difference you are thinking of is the absence of rectification, and, I gather, the possible origin from molasses?—Yes, or vegetable spirit of any sort.

13284. I do not quite understand your position with regard to molasses if you want nothing but a pure alcohol. You can produce, surely, a perfectly pure alcohol from molasses?—I have never heard of molasses brought in connection with the spirit we make—gin. I have always imagined the cheap spirit was made from vegetables.

13285. Potatoes?—Yes, and beet.

13286. Would you agree with a witness we had this morning, that there is so marked a distinction between gin as made in this country and imported gin or geneva that no one could ever mistake the difference?—Oh, quite.

13287. Have you had any occasion to have any spirit analysed or tested?—Yes, we did it about five years ago. We found it absolutely free from fusel oil of any sort or furfural. We had it analysed by the analytical chemist to the Finsbury Borough Council, and another gentleman in the West End, I have forgotten his name for the moment.

13288. Is your view that it should contain nothing but alcohol, or do you know if your gin was found to contain ethers or other bye-products?—No, we took all those out and then we added the flavouring of the juniper and the other herbs to it to take their place.

13289. You would not agree with the witness who told us just now that there were two things he wanted

to do, one was to remove objectionable impurities and another was to retain some quality in the spirit in addition to the alcohol, without which it would be insipid?—No, I should not agree to that.

13290. That is not your view?—No.

13291. The nearer it approaches to pure alcohol the better you are pleased?—Provided you can properly flavour it with a distillation of other herbs.

13292. (*Mr. Guillemard.*) With regard to Clause 69 of the Spirits Act, you of course speak for your own firm when you say that you wish Clause 69 either left as it is or only modified by taking the distillers out of it?—Yes.

13293. Do you speak for the trade generally, apart from your own firm?—No, I heard that it was on the tapis that this Clause should be repealed, and it would hurt us very much, and I wish to point that out to the Commission.

13294. But you come here representing your own firm only and not on behalf of the trade?—Quite so.

(*Chairman.*) The Commission are much obliged to you for your evidence.

The witness withdrew.

Mr. Richard F. Nicholson, re-called.

Mr. R. F. Nicholson.

13295. (*Dr. G. S. Buchanan.*) Perhaps you could help the Commission by telling us your view with regard to the elimination of bye-products in preparing spirit for gin. Is it essential, do you think, for making gin that you should get as near as possible to pure ethyl alcohol without any other constituents?—Our view distinctly is that you want a spirit suitable for the purpose before you begin to make gin. You want a spirit with a good body in it, a fairly fat spirit, a spirit that retains the essential character of the material that it is made from. For instance, a spirit distilled from wheat would have a flavour that I can best describe as "bready"; a spirit from rice would be rank and have an unpleasant flavour; rye would give a penetrating flavour which you could not easily remove; barley would be pleasant; maize would be good and clean, but with a slight maize characteristic, and other materials in the same sort of way. What those particular flavours are I cannot tell you, but the material decidedly appears in the plain spirit.

13296. After rectification?—Previous to rectification.

13297. But when you rectify?—Rectification is a vague term. You could, of course, rectify those spirits to such an extent that you had nothing but alcohol and water left. In that case you would be producing spirits of wine; but rectification, I take it, merely means improving the spirit, and the art of the gin distiller, and what they used to call in the olden days the mystery of the gin distiller, is to preserve the body in the spirit on which you can hang the particular flavours from the juniper and the other ingredients, instead of having a thin alcohol that would take no flavour or style whatever. In a short time, if you rectify to that extent, the alcohol would eat the flavour away and you would not have a permanent flavoured gin.

13298. (*Mr. Guillemard.*) It really comes to this, that the art of gin making is to arrest the rectification at a particular point which experience has shown to be desirable?—Yes.

13299. (*Dr. G. S. Buchanan.*) Can you refer us in any way to any analyses that show whether actual bye-products are present, and if so, in what proportion?—I think they would vary in the case of every firm. There is no uniform article of gin. Each firm makes its own particular variety.

13300. Is there likely to be any firm which would have a spirit that before the addition of the flavouring matter was practically nothing but alcohol, and there were no bye-products at all?—It might be so at times, but it would merely point to the ignorance and want of knowledge on the part of the gin producer.

13301. Perhaps you could tell us this: Have you met with cases where gin has been prepared for sale in this country without any rectification?—I have no personal knowledge of the fact, although I strongly suspect it.

13302. (*Dr. Cushny.*) I should like to know whether you insist on gin being made from corn?—I do.

13303. You do not think it is possible to make it from molasses?—I think it is possible—in fact, from 1808 to 1810, when there was a scarcity of corn in the country corn was prohibited for distillation, and the London distillers, and even the Scotch distillers, had to go to molasses. I must tell you that I can see by our books that the molasses they used in those days were a very high grade of sugar. I see that from the very large produce they produced per cwt., so it was a very high grade class of sugar and not what we understand as molasses to-day. During that period whiskey and gin and all home spirits had to be produced from materials other than corn, so no doubt it would be possible to make gin from molasses, but in the interest of the consumer I take it it is advisable that gin should be produced from corn. It is generally recognised as a corn spirit, and I look upon it as unfair competition for certain traders to use inferior articles in their manufacture without declaration.

13304. (*Chairman.*) When you say in the interests of the consumer, does that mean greater health and a more healthy drink?—I should say both as a matter of health, and also because the consumer assumes that gin is produced from a corn spirit.

13305. Is he injured in any way?—He expects it and pays for it.

13306. (*Dr. Cushny.*) Do you think an ordinary consumer knows that his gin is made from grain?—I think so.

13307. (*Chairman.*) We thank you for the further assistance you have given to the Commission.

The witness withdrew.

Adjourned for a short time.

Sir William Boord, Bart., called.

Sir W. Boord, Bart.

13308. (*Dr. G. S. Buchanan.*) You are the principal partner in the firm of Messrs. Boord and Son?—I am.

13309. You are rectifying distillers and wine and spirit shippers, and merchants of Tooley Street?—Yes.

13310. You entered the firm at the beginning of the year 1858?—That is so.

13311. I think you had a family connection with the business before?—Yes, my father was before me.

13312. The business was established last century?—In 1744, or earlier. I am not quite sure as to the exact date.

13313. Your firm has manufactured gin and cordials since then?—Yes.

13314. You were member of Parliament for Greenwich from 1873 to 1895?—Yes.

13315. And a member of the Parliamentary Committee on Spirits in 1890-1891?—Yes.

13316. In response to the Commission's invitation to give evidence with regard to gin, you wish to speak on behalf of your own firm and with regard to your personal knowledge?—Yes, and that only.

13317. Could you tell us how you would define gin?—I should define it as I state in my *précis*. I had

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better perhaps read it as being more accurate. I define it as a potable spirit—sweetened or unsweetened—distilled only by those who hold a rectifier's licence and use the necessary stills and plant, under the control of the Excise, for the purpose. It is made of spirit specially rectified and re-distilled with juniper berries and other flavouring herbs, and, in my opinion, is the most wholesome potable spirit, since the flavouring material has valuable therapeutic action, and the spirit, being highly rectified, is of the purest manufactured.

13318. I notice that your definition restricts gin to spirit that is distilled only by those who hold a rectifier's licence and use the necessary stills and plant. Would you like to elaborate that in any way?—I can only elaborate that by referring to old books. There was one printed about the middle of the 17th Century and one printed about the middle of the 18th Century, in both of which the predecessor of gin was described as a spirit distilled with the flavouring matter, and it is necessary now because the true flavour of gin cannot be obtained by any other means. All sorts of tinctures and essences are sometimes used by people who imitate gin, but they do not make the real article.

13319. Would you consider it necessary to proper gin that it should not only be made by those who hold a rectifier's licence and possess the necessary stills, but that they should use them?—It cannot be made by others, because it must be made of rectified spirit, rectified spirit being a spirit further cleansed after it comes from the grain distiller and some of the impurities known as higher alcohols are destroyed and the spirit is made practically pure. As regards its purity, I mention further on in my *précis* that an analysis was made some time ago by the "Lancet," a copy of which I hand in, containing that analysis. (*The same was handed to the Commission.*)

13320. That was in August, 1903?—Yes.

13321. That was an analysis which was made according to the custom of that journal without a charge for the work done and for publishing the result?—Yes.

13322. May I just go back to the question of definition. We had some evidence this morning to the effect that it was believed to be possible to have no rectification. We did not have concrete evidence about it, but it was believed to be the practice in the case of some cheaper gins, or in the case of some of the exported gins, that practically speaking the spirit was merely a highly flavoured grain spirit, but without rectification?—A gin label can be put on any bottle, but it does not guarantee the contents at all. I am merely giving you what I believe to be the technical description of proper gin.

13323. You would think it desirable to require that it should be restricted in the way that you suggest to those who hold a rectifier's licence and use the necessary stills?—Yes.

13324. I see you mention "under the control of the Excise"?—Yes, that follows as a matter of course.

13325. Even when the spirit is in the first instance duty paid?—Yes. The grain distiller is under the Excise and we are also under the Excise, although our spirit is duty paid. We cannot use our stills without their being previously unlocked by the Excise, and after the completion of the operation they are locked again.

13326. Even although you are distilling duty paid spirit?—Yes, even although we are distilling duty paid spirit.

13327. Several witnesses this morning speaking about gin were of opinion that the materials from which gin was distilled should be restricted to cereals, and that it should not include molasses. Would you give us your own view about that?—I never heard of molasses spirit being used for gin. I could not express an opinion. I do not think it is possible, but I should perhaps make this proviso, that pure alcohol is exactly the same from whatever source it is derived—I mean chemically pure alcohol. If you had several samples you could not distinguish one from the other, because there would be no impurity, and therefore it would be the chemical substance pure and simple, but molasses spirit generally means coarse spirit, and I never heard of that being used for gin.

13328. Not used for the purpose of rectifying?—No, I should say not.

13329. Would you say, as a matter of fact, that the object of the rectifier in making gin is to obtain pure alcohol without any bye-products?—Very nearly pure—as nearly as is practically possible except in the laboratory. There are laboratory methods, which, of course, you are acquainted with, by which perfectly pure alcohol could be obtained, but we do not go quite so far as that. As you will see, in fact, from the "Lancet," it is practically pure, otherwise the flavour would be interfered with.

13330. With regard to age, do you consider that any improvement is effected in the case of gin?—None whatever. The improvement of the spirit of which you have heard a good deal, namely whiskey, is caused by the decomposition of higher alcohols owing probably to free acid, and they are partly converted into aromatic ethers, but that is not the case with gin. It is pure to begin with. It relies not on the decomposition of any of its impurities, for it has practically none, but on the flavour of the berries and herbs with which the spirit is distilled.

13331. Can you tell us whether it is your practice in providing the flavouring materials to-day to add the juniper berries and other materials to the still, or do you use the oils themselves?—No. The oils will not make the same kind of spirit. The berry and other ingredients themselves are used to make true gin. I do not answer for anything but true gin.

13332. You were asked whether you could give us information with regard to rum, but you point out in your *précis* that you merely deal with rum as a matter of sale?—Yes, not being a manufacturer of rum I am not in a position to speak of its mode of manufacture. I can only speak of the mode of sale, and what I have said in my *précis* applies to other spirits as well. I do not know whether the Commission has the power in its reference, but it would be a great advantage, not only to our trade, but to the trade in general if manufacturers were compelled in some way or another to sell what their labels, and what their invoices, and what their price lists describe.

13333. The first essential to that would be that some general understanding should be arrived at by means of a definition, as to the sense in which particular words should be used?—Exactly. I will give you an instance. I should speak of Jamaica rum as one of a class of goods. It is clearly rum made in Jamaica, and any rum that is made in Jamaica may be sold as Jamaica rum. But it would be very wrong to mix Jamaica rum with Demerara or Leeward Islands rum and sell that as Jamaica rum. It would be a fraud in fact.

13334. We have evidence that it is done?—I am not surprised to hear that.

13335. You think that any steps which can be taken by means of definitions or otherwise to stop that misdescription would be a good thing in the interests of fair trading?—Fair trader has a special signification in the present day.

13336. I do not mean that?—I think it would be doing much to put an end to unfair competition which the Sale of Food and Drugs Act does not touch. If you will refer to the concluding words of my *précis* you will see that I say that. The Sale of Food and Drugs Act applies to the retailer and shop keeper, but it does not apply to the wholesale trader—at least I take it that it does not, but I am not a lawyer.

13337. Of course an essential part of the Sale of Food and Drugs Act procedure is that it should be based on chemical analysis, which I suppose is another objection?—Chemical analysis can do nothing with either gin or rum, because the impurities in those spirits—which are called generally fusel oil—are so complicated that it is quite impossible to do much with them in the laboratory.

13338. (*Dr. Cushny.*) Would you exclude all other forms of alcohol except the corn spirit?—I think that is largely a question of custom and of suitability of the spirit. Corn spirit is what I should think is almost universally used. You say corn spirit, but I should prefer to use the word grain spirit. Grain and corn signify perhaps somewhat different things, but if you call it grain spirit I think that is generally used, and I do not think other spirit does so well.

13339. Let me, for example, take potato spirit?—To my knowledge there is no spirit on the market that is sold as potato spirit. I think probably the spirit you refer to comes from Germany. It is generally sold as

German spirit. Whether it is made of potatoes or of rice or of sawdust I know not, but as I have just told Dr. Buchanan, provided the spirit is pure you cannot distinguish its origin.

13340. You would object to using this German spirit simply as a matter of custom?—It is a spirit that is very good for certain purposes. It is very good for producing very strong alcohol, chiefly because it is shipped at very high strength, but we, of course, in our process of distillation, can make it of a much higher strength still, but still it is a long way above the usual strength of English spirit, and is thin in quality. It is very good for scientific purposes where pure alcohol is required, and for many manufacturing purposes, but it is not quite so suitable for gin as the grain spirit.

13341. You do not think it could be used for gin making?—I will not say exactly that, but I think grain spirit makes a far better gin.

13342. I do not understand why exactly?—I think the German spirit is very thin, and that thinness is probably produced by their making yeast. Fermentation for the purpose of yeast making is carried very much further than merely for spirit making.

13343. But if this German spirit is 70 per cent. alcohol and you make a corn spirit of 70 per cent. alcohol, they must be identical?—No, not necessarily, because they would not be chemically pure. A chemist would object to both of them. They would not be absolutely chemically pure, and that is where the difference comes in. If they were chemically pure one would be as good as the other.

13344. Your grain spirit contains something besides alcohol and water?—Only a trace and the "Lancet" analysis will show you that.

13345. You think those impurities are desirable, do you not?—They hardly amount to anything worth the name impurity, yet no doubt they do make a difference.

13346. I want that explained, because one witness this morning was very emphatic in saying that you wish something in your spirit besides alcohol to make good gin?—He might put it in that way, but it is not the way I should have chosen myself.

13347. (*Dr G. S. Buchanan.*) He said you wanted to get rid of the impurities and at the same time to keep the guts. I do not know whether you understand the expression?—That is a homely phrase, and I think there is a good deal of truth in it. I think very often a grain spirit is called a fatter spirit. It is something of the same idea.

13348. (*Dr. Cushny.*) You agree that you do not require pure alcohol?—Not absolutely pure. If it were chemically pure then it would be unsuitable.

13349. You distil your gin with the berries?—Yes.

13350. I suppose the other constituents are a trade secret which I must not ask you about?—They are merely flavourings.

13351. I suppose you regulate the amount of those constituents by a certain weight of berries, that certain weight of course depending on the quality?—Yes. Juniper berries, for example, vary in different years and they alter in character. They are a vegetable product, and the weight has to be determined according to the quality of the berry. It always has to be the best quality, but even the best quality varies from season to season, and all those differences have to be allowed for.

13352. Do you think it is necessary always to distil the gin with the berries?—Certainly, to make true gin.

13353. Suppose you wished to make 100 gallons of gin, and you wanted so much berry, your method would be to distil the 100 gallons of alcohol with a definite quantity of berry?—Yes.

13354. Would it be gin if you distilled 20 gallons of alcohol with the same amount of berry and then added alcohol?—That is, if I may say so, almost a distinction without a difference. The question is whether you should dilute it at the time of distillation or before or after.

13355. Yes?—That would in a great measure depend on your having a sufficient quantity of spirit of suitable strength in your still to bring over the flavour required, and nothing more; for there is much besides the required flavour that comes over in re-distillation.

13356. It seems to me there is a difficulty in drawing a line between that sort of work and the use of essences?—No, I do not think there is. An essence is merely a solution of an essential oil in spirit. The mode of manufacture of essential oils differs entirely from the process I have described: spirit is not employed and the product differs materially. I do not suppose the most learned chemist in the country could give you an accurate description of what the difference is, but it is so. The mode of manufacture influences the flavour in a way we cannot definitely explain.

13357. You would not object to that method of making gin?—No, provided I could get the same result in flavour and general characteristics, which cannot be done.

13358. (*Chairman.*) You were in the House of Commons from 1873 to 1895?—Yes.

13359. In 1890-91 you sat upon a Select Committee which had reference to a certain extent to a somewhat similar subject matter to that which we have before us?—Yes.

13360. I think you were very assiduous in your attention to it, and you were there every day but one? Did you go with that Committee thoroughly into the questions submitted to them by examination of the witnesses and consideration of the matter? Did the whole Committee go fully into the subjects before them?—Yes.

13361. You had a very distinguished chairman, Sir Lyon Playfair?—Yes, and there were on the Committee Sir Henry Roscoe, and other chemical members.

13362. And there were Mr. M'Ewan, yourself, and others?—Yes.

13363. This is the conclusion of the Committee at that time in April, 1891: "Your Committee are unable to recommend any further provisions as regards adulteration, because they have not found that the spirits of commerce are adulterated with any materials noxious to health." You came to that conclusion?—Yes.

13364. Were you justified by the evidence in coming to the conclusion that that was so?—Yes.

13365. And that the sections of the Food and Drugs Act would be sufficient to deal with the evil?—Yes.

13366. Since that time have you had any reason to change that opinion as regards adulteration?—None at all.

13367. Should you say that the trade in these spirits as far as you know is a pure trade, and that there is no adulteration or little adulteration?—As regards gin, I think the only adulteration, if it may be so called, is in the mode of manufacture rather than in the materials. I do not think there is any adulteration in the ordinary sense of the word.

13368. How does the mode of manufacture cause adulteration?—It is not adulteration, but the product is inferior.

13369. Does the difference produce any article that is injurious to health?—No—but in flavour, yes.

13370. As a practical man engaged in this commercial line, do you see any means of ear-marking these products—these different spirits that are being sold, so as to let the consumer know exactly what it is that he is drinking? Is that practicable or not?—I think so.

13371. To what extent would you go? Take the ordinary customer going into a licensed victualler's house and saying, "I want a glass of whiskey, or gin," what should you show him?—Taking gin in bottle, for example, I should like the label to describe it as "gin made from rectified spirit distilled with berries and herbs."

13372. I should like you to be more definite than that, because that is the thing we have to consider. Take a licensed victualler who is receiving from the middleman, the wholesale dealer, a consignment of gin. He of course takes it upon the recommendation of the invoice probably. Who is to give the guarantee as to the nature of the article sold?—The rectifier would have to do that.

13373. He would have to give it to the licensed victualler?—Yes.

Sir W. Beord, Bart.

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13374. Then the licensed victualler has to take the label that the rectifier gives him and put it on the bottle?—Yes.

13375. If it is a false label who is to be answerable? The rectifier gives the label to the licensed victualler, and the licensed victualler would show it to the customer across the counter, if it is to be of any use. Is that practicable?—No, I do not think that would be practicable. The difficulty becomes very great, of course, where spirit is retailed in that way.

13376. It is the consumer that we have to deal with. The purchaser of a large quantity obtains his invoice, and if the invoice is false that can be remedied; but the practical difficulty that we have is to deal with the ordinary consumer who gets his drink across the counter. With your parliamentary experience, can you help us and tell us how to draw a clause to deal with that?—Of course your difficulty is the same as with beer. If you ask for a glass of beer, how can a publican prove to you that it is Bass's or Allsopp's, or anybody else's? You have to take his word for it.

13377. If it is on draught I quite agree with you, but if it is in bottle you get the Bass or Allsopp label upon it. If it is on draught I really do not see how you are to put this before the customer?—There is a difficulty there, no doubt.

13378. There are so many articles. You begin with one, and, as you know, there are others. Take tea: there are many qualities of tea—China tea, Indian tea, and others. How can half a pound of tea be labelled?—I admit it is very difficult. Tea is generally sold in packets, and there would be no difficulty in putting a label on that. I believe it is sold in quarter pounds, half pounds, and so on, so that the middleman could put a label on that easily enough.

13379. But you have to trace it to the grocer in the country towns. He is the person who would be answerable to the law, because he is the person who sells it?—If he labels the packet falsely then he would be liable under the Act.

13380. If he does it knowingly—if he says, "I sell this to you," which is not the thing he sells, then he is liable. This is what your Committee said: "Under Section 6 of the first Food and Drugs Act a sale is illegal if the purchaser be prejudiced by buying any article of food which is not of the nature, substance and quality of the article demanded by the purchaser." If you say, "Give me China tea," and he gives you Indian tea, then he would be liable?—Yes.

13381. I was hoping we were going to get some assistance from you from the Parliamentary point of view?—I am very sorry I cannot give it to you. It is a most difficult problem.

13382. (*Dr. G. S. Buchanan.*) Where the Sale of Food and Drugs Act requires that an article that is sold shall be of the nature, substance and quality demanded, the essential test provided by those Acts is a chemical test—an analytical test?—Yes.

13383. The difficulty largely arises in connection with those foods or drinks in which there is, in the first place, no official definition as to what is the meaning of "the substance demanded," and in the second place no understanding as to what it should consist of chemically?—Yes.

13384. For instance, in the case of gin sold over the counter, if there was an official definition of gin, for example, in such terms as you have given us or in some other terms, to a straightforward retailer, a man who, although he, no doubt, wished to buy his gin in the cheapest market, yet at the same time wished to get a satisfactory product—a genuine product—would it not be of advantage to have an official definition to which he could refer and say that he required his spirit to be at any rate gin as so defined?—I think that would be quite possible, but it would hardly meet what Lord James put to me just now.

13385. You mean as to how to control it?—I mean it would be quite possible as between the manufacturer of gin and the publican, but as between the publican and his customer it would not apply, because the customer can get no security.

13386. Unless, of course, you were in a position to check it by analytical means, knowing what he received and testing from time to time whether what he received was the same quality as what he delivered?—The police could at any time go to the publican and buy a certain quantity of gin and then tell him that they were going to analyse it in the usual way, but they would not get much information from the analysis, as you can see by the "Lancet." There is very little information to be got there.

13387. In the case of gin that is particularly so?—Yes, particularly with gin.

13388. Is the evidence of the taster of advantage there?—Yes, experts could tell.

13389. It has been suggested to us that local authorities, besides applying the Sale of Food and Drugs Act, in order to check the proceedings as between the retailer and the customer should also be able to apply the Merchandise Marks Act, and then in that way bring in expert evidence which they cannot do under the Sale of Food and Drugs Act on the subject of taste and so forth?—Yes, but you cannot apply the Merchandise Marks Act unless you have a capsule or a box or label or cork branded, or something to identify the goods.

13390. (*Mr. J. Y. Buchanan.*) This is the analytical record of your gin as it appears in the "Lancet" of August 1st, 1903, at page 321:—"Unsweetened Gin (Five Star) (Boord and Son, 115-121, Tooley-street, London, S.E.). Genuine gin is a highly rectified spirit, and therefore contains a very small proportion of those secondary products of alcoholic fermentation which characterises whiskey, brandy, and rum. The following are the results in regard to secondary products yielded by the sample of gin above described, expressed in grammes per hectolitre of absolute alcohol present:—acidity reckoned as acetic acid, nil; aldehydes, 1·78; furfural, nil; ethers expressed as ethyl acetate, 37·28; and higher alcohols, 44·60. Thus the total secondary products amount to only 83·66 grammes per hectolitre of absolute alcohol present. Further results of analysis were as follows: extractives, 0·04 per cent.; mineral matter, 0·01 per cent.; sugar, nil; alcohol, by weight, 37·67 per cent. The spirit is thus correctly described as dry. It is a pure spirit, delicately flavoured, and entirely free from sugar." According to this, the secondary products are 83·66 grammes per hectolitre, that is per 100,000, as the chemists express it?—Yes.

13391. That is looked upon as an alcohol that contains very little secondary products, but do you attach any particular significance to the secondary products as a constituent of the alcohol which you use for making your gin?—No, not exactly, except that I suppose the presence of that very small quantity gives the spirit a roundness, a fatness, that it would not otherwise possess, and it takes away the thin, wiry, flavourless quality that attaches to pure alcohol. Pure alcohol has absolutely no flavour, and the flavour here would be so minute as to be imperceptible, but still it gives something—a foundation.

13392. Do you find that your gin made of this alcohol suffers any advantageous alteration by keeping?—No, none at all.

13393. Of course, if it were made with absolute alcohol, that is with perfectly rectified spirit, though it would contain no secondary products, it would be practically the same thing?—Yes.

13394. So that it is more a sentimental kind of feeling as to the secondary products, because they would probably alter by keeping?—It is a difference which is so minute as to be out of the reach of the chemist.

13395. You would not think it advisable yourself to rectify this spirit further before using it to make your gin?—No. We could do so, but we think that is sufficient.

13396. When you distil your gin with the berries and with the spirit, do you get it above the strength at which you sell it?—Yes. I should say that the bulk would be about 25 per cent. over proof or more according to Sykes's hydrometer.

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

TWENTY-FIFTH DAY,

Wednesday, 8th July, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
H. T. BROWN, Esq., I.L.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. ALGERNON E. ASPINALL, called.

Mr. A. E. Aspinall.

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13397. (*Dr. Horace T. Brown.*) You are, I believe, Secretary of the West India Committee?—That is so.

13398. That, I believe, is an association of planters, merchants, and others interested generally in the British West Indies, British Guiana and British Honduras?—Yes.

13399. The West India Committee, I believe, has been established for a great many years?—Yes, it was established early in the eighteenth century, and was incorporated by Royal Charter on August 4th, 1904.

13400. What are the objects of the Association?—The objects of the Association as set out in the Royal Charter are by united action to promote the interests of the agricultural and manufacturing industries and trade, and thus increase the general welfare of the British West Indies, British Guiana and British Honduras.

13401. The question of rum has come before you?—Yes, constantly.

13402. Will you give us your idea of what constitutes rum?—The views of the West India Committee are enunciated in the following statement: "That only spirit distilled direct from sugar-cane products in sugar-cane growing countries is entitled to be called rum, and that such spirit has been called and recognised as rum for over half a century, whether made in a pot or a patent still."

13403. You are aware that it has been stated in evidence that the term "rum" should be confined to the pot still product?—We are, and we do not agree with that view.

13404. Would you consider that if the material is the product of the sugar-cane or the spirit distilled from that it would be entitled to the term "rum," irrespective of whether it was prepared in a pot or patent still?—Emphatically.

13405. In your *précis* you have gone into certain questions connected with the surtax of spirits imported into this country—that is the differential charge?—Yes.

13406. It means that the imported spirits, that is the spirits imported into this country, pay a duty somewhat in excess of the Excise duty levied on spirits of similar strength?—That is so.

13407. I think it is scarcely within the jurisdiction of the Commission to go into these questions.

(*Chairman.*) I think it is not. The question of taxation is not before us?—We were afraid that it would not come within the purview of the Commission, but at the same time we were anxious to take this opportunity of emphasising what we have felt for years has been a grievance.

(*Chairman.*) It is not for us, or we would hear you with pleasure.

13408. (*Dr. Horace T. Brown.*) I suppose your attention has been called to the evidence of Sir Nevile Lubbock given before the 1890-91 Committee on Spirits?—It has.

13409. Sir Nevile Lubbock was at that time Chairman of the West India Committee. Do you agree with the evidence which was given before the Committee?—The evidence appears to us to be absolutely on all-fours with that which we are now submitting. I must express regret that Sir Nevile Lubbock, who is still our Chairman, is unable to attend to-day as he is away from London; otherwise I am sure that he would have been here.

13410. Can you give us information about the rums which come from Hamburg?—I am afraid I am not authorised to give you any evidence on this point, but if you wish the West India Committee to express their views I have no doubt that they will be glad to do so. I am not personally authorised to make any further statement than that which I have already made.

13411. You cannot tell us anything about the highly flavoured rums which you export?—I am afraid I have not the technical knowledge to enable me to do so.

13412. Are there any general remarks you would like to make on the rum manufacture?—Yes. I think it might perhaps interest the Commission to have a definition of the term "rum." I do not know whether you have already had that before you or whether it might be of interest to you.

13413. You have already given that, have you not?—No, not the derivation of the term, only the application of it. In the old days it used to be called kill-devil, and it was subsequently called rumbullion, which is an old Devonshire term for uproar or disturbance. I found in an old book I was reading the other day a description of "rum," which I should like to read without prejudice: "The chiefe fudling they make in the Island is Rumbullion *alias* killdevil, and this is made of suggar canes distilled, a hott, hellish and terrible liquor." I should like to say we do not agree with these epithets.

13414. What is the date of it?—About 1670, I should say, but I can give you the title of the work if you will allow me to do so later.

13415. What is your idea as to the derivation of the word "rum"? It is suggested that it is the last syllable of the word "saccharum"?—I should think it is extremely likely. In the old days in the West Indies people spelt everything phonetically, and it is quite likely that "rum" was derived from the last syllable of the word "saccharum." A large number of Devonshire colonists went out to settle in the West Indies, and they probably connected the word with rumbullion.

13416. (*Dr. G. S. Buchanan.*) Has the West India Committee taken any action at any time for the encouragement of the rum as produced in the West Indies as a whole in the matter of its quality or of its standard?—No, not that I am aware of.

13417. Can you tell me which of the West Indies produces rum in any considerable amount?—Jamaica produces about 1,250,000 gallons per annum, and the rest of the islands among them produce about 200,000 gallons. British Guiana, which we consider part of the West Indies, produces about 2,500,000 gallons.

13418. The largest output is British Guiana?—Yes, by far.

Mr. A. E. Aspinall.

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13419. Is that principally by the patent still process?—No, the majority of the estates use the pot still, but I am unable to tell you the actual proportion.

13420. Has any suggestion been made at any time to your Committee that they should exercise any form of control or set up for the guidance or assistance of the trade any standard or definition of what rum or Jamaica rum should be?—It has been considered, but no definite decision was arrived at.

13421. I do not know if you can speak for your Committee in this respect, but do they consider that it is desirable in the interests that they represent that Jamaica rum, when it is made in Jamaica, should be separately distinguished in the home market?—I think our view may be taken as being that we are of opinion that there should be a distinction. I may say that we are quite at one with Mr. Nolan in so far as the prosecutions for selling imitations as Jamaica rum are concerned. We have many Jamaica planters and merchants on the West India Committee.

13422. You think it is undesirable that a trader over here should take Jamaica rum and mix it with other rum of a cheaper quality not obtained from Jamaica and without the Jamaica characteristics, and call it Jamaica rum?—Most certainly.

13423. Can you speak for your whole Committee on that point?—I think so without the least doubt.

13424. This question that you raise here with regard to surtaxes is outside our inquiry, but there is one point which does seem to me to rather bear upon it. Will you look in your *précis* at C. "Loss from having to rectify spirits which have already paid duty, in separate buildings, thus incurring loss of duty-paid spirit in manufacture and transit." Do you state that as a reason for the difference that it made in regard to rum? Surely it applies mainly to rectified spirits such as gin?—Precisely. With whiskey there is no rectification of duty-paid spirit. The 2½d. of the surtax is, however, allowed to compensate for that particular item, and that is what we take exception to.

13425. My point is does it compensate for anything in the case of rum?—No, and that is one of the grounds for our grievance.

13426. The question seems to bear on the theory of home spirits being put together as British plain spirits?—That is so.

13427. (*Mr. Guillemard.*) I see you are prepared to recognise as rum spirit distilled direct from sugar-cane products in sugar-cane growing countries, whether made in a pot still or a patent still?—That is so.

13428. I do not think you were present when Mr. Nolan gave his evidence?—No.

13429. Have you seen a report of his evidence in print?—I have.

13430. I should like to put this question to you, because it is rather important. Mr. Nolan came to us as an authorised representative of the Government of Jamaica, and is recognised as such by the Colonial Office, and he pressed that nothing should be allowed to be called rum except what was made in a pot still. Did you see that?—I did.

13431. Would you disagree with that altogether?—We should; and I might mention that we have on our Executive Committtte, who arrived at this decision on behalf of the General Committee, several proprietors of Jamaica estates where rum is produced with a pot still, and they were quite willing to accept this definition which is now before us. The feeling of the Committee was practically unanimous.

13432. Have you any idea what proportion of the people interested in Jamaica would endorse Mr. Nolan's suggestion?—My own opinion is that the proportion would be very small.

13433. (*Dr. G. S. Buchanan.*) You are speaking of rum generally, and not Jamaica rum?—I am speaking of rum generally, for we are interested in many of the Colonies.

13434. (*Chairman.*) At any rate, Jamaica is included in your definition of rum?—Certainly.

13435. (*Dr. G. S. Buchanan.*) The question whether rum should be a pot still product or whether Jamaica rum should be a pot still product are two different things?—We refer to both in our evidence. It is, of course, possible, that if many central sugar factories were erected in Jamaica, the owners might like to produce rum with a patent still, in which case they would very much resent being left out in the cold, if the term "rum" were confined to the product of the pot still. I should explain that—practically—the patent still is not in use in Jamaica at the present time.

The witness withdrew.

Mr. Alfred Gilbey, recalled.

Mr. A. Gilbey.

13436. (*Chairman.*) You are a member of the very well-known firm of W. and A. Gilbey, Limited?—Yes.

13437. First of all, I want to ask you a few questions as to rum. What is your definition of rum? What is it produced from?—We say that rum is a spirit produced from certain portions of the saccharine matter yielded by the sugar-cane.

13438. Probably comparisons are objectionable, but you put the rum of the Island of Jamaica as in the first rank?—Yes.

13439. We will not say whether they are inferior or not; but there are other rums, produced in Demerara and other colonies which are sold in the market as rum?—Yes; they are sold far cheaper.

13440. And therefore, of course, they are not sold as Jamaica rum?—No.

13441. Do you deal in the cheaper qualities of rum?—The only other rum we ever buy is a small quantity of Demerara. I have a list here which will show you that.

13442. That is in addition to your Jamaica rum?—Yes; we sell one quality, but we only sell about one bottle of Demerara where we sell 35 bottles of Jamaica rum.

13443. Is your trade large in this rum?—Comparatively. We sell about 20,000 dozen of Jamaica rum a year.

13444. For British consumption?—And export as well.

13445. Do you supply the Navy at all?—No.

13446. What distinction do you make in your price lists or your statement to the public between the different qualities of rum?—We have our labels.

13447. Will you read them out?—I have some of the labels here showing how we distinguish between Jamaica and Demerara rums: "Castle Grand Jamaica rum." Then we put: "Finest and oldest Jamaica rum," and the strength we state and the measure—"Six bottles containing a gallon. Bottled and guaranteed by W. & A. Gilbey." Then the Demerara rum, of which we have only one quality, we call: "Castle D.M.Rum. Fine old Demerara rum, 25 per cent. under proof."

13448. Can you state generally what is about the difference in price?—It is 2s. a dozen. The Demerara we sell at 2s. 6d. a bottle, and the Jamaica at the same strength at 2s. 8d.; that is 2d. a bottle difference—2s. a dozen. That is about the difference in the first cost between Jamaica and Demerara.

13449. Does each bottle bear one of those labels that you have read?—Yes.

13450. What would the general public gather from those labels? Do you say on the label that it is Demerara rum?—Yes.

13451. You draw a distinction?—Yes.

13452. Did you think it a good thing for the public or for your trade that the distinction between Demerara rum and Jamaica rum should appear on

the label?—We thought it only fair to the public because Demerara rum is much cheaper.

13453. It is 2d. a bottle cheaper?—Yes. Jamaica rum has, of course, always been known as a much higher quality of rum than Demerara.

13454. And you thought it right that the public should know that?—Yes.

13455. Are those labels universally used by you when sending out Demerara and Jamaica rum?—Yes, we never send out any without being labelled.

13456. The Demerara and Jamaica too?—Yes.

13457. With regard to the production both of Demerara and Jamaica rum as far as you know, is there any adulteration in it, or is it a pure trade?—With regard to Jamaica rum, we know that it is an absolutely pure trade. It is made, as I said, from the sugar-cane, and it is all distilled in a pot still. I do not believe that they have the patent still at all in the Island of Jamaica. I believe they do not allow one.

13458. Do you think there is any adulteration in Demerara?—I have read the evidence in the newspapers, and I see they do have patent stills in Demerara. I do not say that there is adulteration.

13459. Is there anything in the sale of this Demerara rum that ought to be checked on account of its being adulterated?—No.

13460. The materials that are used as far as you know are pure materials?—Yes.

13461. What do you say as to the distinction between patent and pot still? Is there anything injurious produced by the patent still process?—No, I do not think so.

13462. Your label came into existence, and it is used for the purpose of letting the public know that they are obtaining a cheaper article in the one case than the other?—Yes.

13463. That is the whole object?—Yes. I may say we never blend Demerara rum, or any other spirit with Jamaica rum.

13464. Do you blend?—We blend the different parcels of Jamaica rum over here, but we never blend any other spirit with Jamaica rum, I mean to say, that we never blend Demerara or any patent still spirit with Jamaica rum. It is all pure Jamaica rum.

13465. What is the effect of time or age upon these rums?—I think time undoubtedly improves the rum.

13466. What is your practice as to selling rum—I mean as to age?—We do not state the age on it. It varies.

13467. Have you any objection to saying the age?—I think perhaps I ought not to state the age, but it is according to price. The greater the age the higher the price.

13468. Up to what age would the price increase?—Up to eight or ten years it would go on improving.

13469. And you add price for the age?—Yes, the price increases. That is the only difference in it practically.

13470. What effect has time? Does it mellow the rum, or alter the flavour?—It mellows the rum the same as it does pot still whiskey.

13471. Do you know enough to say which side you take in the controversy as to the exclusion of patent still rum? Would you exclude from sale patent still rum?—Where it was used I should insist upon it being stated on the label. That is the line we should take.

13472. Is your practical knowledge sufficient to enable you to answer this question? Is there more difference between the use of patent still and pot still rums than the difference between patent and pot still whiskey? I do not know whether you can compare the two things?—I do not know that I have ever seen patent still rum. Rum is a very strongly flavoured spirit. I should think there is the greatest difference.

13473. We have evidence that patent stills are used in Demerara?—Yes.

13474. What is your idea about Demerara patent stills?—I believe to a certain extent the patent still is used, but I am not quite sure on that point. I have not any evidence.

13475. If it be used in Demerara, you do not see any evil effects from it?—No, I do not see any evil effects from it, but I think it ought to be stated on the label that it is patent still.

13476. Why?—Because it is a much cheaper article.

13477. Demerara pot still is cheaper?—Yes.

13478. You get that with some of the Demerara?—Yes.

13479. I do not understand this passage in your *précis* about the native habits. Will you state your view about the natives?—I saw a well-known native of Jamaica only yesterday, and he stated to me that there was very little drunkenness amongst the natives of Jamaica although rum was so cheap. He accounted for it by the fact that rum was such a full flavoured spirit that it would bear a great deal of dilution with water, and the natives always well diluted it with water before consuming it.

13480. Have you any knowledge at all of the imitation rum?—No, I have never seen any of it.

13481. It is not admitted to the trade as far as you are concerned?—No.

13482. Do your firm also deal with Geneva and gin?—Yes.

13483. To a large extent?—To a considerable extent in gin.

13484. First of all as to Geneva. That is rectified spirit imported from Holland?—Yes, it is distilled mostly from rye, and it is flavoured with juniper berries and other substances.

13485. How does that rank in the trade? What is the difference between Geneva and our British gin as to price?—I do not think there is any difference in price. I think there is hardly any.

13486. There is also what is known as Hollands?—That is the same as Geneva.

13487. Is it synonymous?—Yes, it is Hollands or Geneva.

13488. Do you suggest it is possible to place any restriction on the materials to be used in producing gin?—I do not think so.

13489. Of course, we cannot do it in foreign countries, but in this country is the spirit used in the manufacture of Geneva and gin rectified?—Yes.

13490. Does the age affect these gins?—No; it has a detrimental effect, if any, on rectified spirit.

13491. You would not keep the spirit in bond for any time?—No.

13492. (*Mr. Guillemard.*) I see you state in your *précis* that Jamaica distillers have reason to complain against the present regulations which allow rum to be blended in bond with any other foreign spirit and sold for exportation as rum?—Yes.

13493. Do you suggest that that goes on to any extent?—I can only assume that it does by the very low price that one hears of rum being quoted abroad.

13494. I put it to you that can only be done by evasion of regulations; because if you mix a genuine rum in bond with another foreign spirit that is not rum, you cannot export that as Jamaica rum, and you have to export that as mixed spirits?—Yes; but then it may be invoiced.

13495. But that must be done outside bond?—Yes; absolutely.

13496. Is there any way in which you can suggest that the Revenue Departments could help you more?—Could not you forbid it being mixed?

13497. In bond?—Yes.

13498. But supposing you did that, then what about that which was mixed outside?—But if you prevent it being mixed in bond you prevent it being shipped abroad as rum.

13499. That brings me to another question, as to all these operations that are allowed to be done in bond for export and not for home consumption; and there are several of them. For instance, the operations under Section 69 of the Spirits Act and the mixing of British and foreign spirits?—Yes.

13500. Of course, they were allowed because traders wanted them; but just now there seems to be before this Commission a question of people pulling different ways: some people want those concessions taken away

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from the trade, and some want them continued. Take first the mixing of British and foreign spirit. Would your view be that it would be a good thing to prohibit that?—Yes.

13501. You realise that it would destroy the trade of certain individuals?—I think it would be fair, for instance, to the Jamaica trade—to their rum.

13502. That is not quite an answer to my question. You realise that it would destroy the trade of certain individuals if it was done? I am not judging whether it should be done; but if it was done the trade of certain people that exists now would stop, would it not?—Illegitimate trade certainly would be stopped.

13503. But would you be prepared to call that a necessarily illegitimate trade?—Yes.

13504. The mixing is one thing, and to call it Jamaica rum after it is mixed is another?—Yes.

13505. One thing is illegitimate; but the mixing and sending it abroad under the description of "mixed spirit" is that necessarily illegitimate?—I think it is undesirable that you should take 10 gallons of rum and mix that with, say, 90 gallons of German or other spirit, and that that should reach anyone as rum.

13506. I am asking you to regard the actual operation as carried out in bond. Say that rum is blended in bond with other spirit and is exported under the regulations as mixed spirit. Would you want to stop that?—I should like to stop them both.

13507. Even though the product was not described as rum?—The worst of it is that it may reach someone else as rum.

13508. But say it reached them as mixed spirit?—There is no sale for mixed spirit. Nobody would buy mixed spirit.

13509. Not in the places where it goes to? — You could not sell mixed spirit in Australia or the West Coast of Africa. If anything was labelled "Mixed Spirit" I do not think you could even sell that to the natives.

13510. You would say that any mixing that is done for export under those conditions is undesirable, and you think it ought to be stopped?—Yes.

13511. You are aware that your view is opposed to that of other people in the trade?—I have not discussed it with anyone else in the trade.

13512. We have had lately a good many representatives of firms of standing who want one or other of those concessions kept?—Yes. The only thing I would like would be the sweetening. I would like to add certain sweetening, for the purpose of the flavouring of gin in bond. Anything in the nature of flavouring I would allow for a rectified spirit.

13513. The only thing you would object to would be the mixing of British and foreign?—Yes; I object strongly to that.

13514. We have had some witnesses who have asked for that to be continued. Do you know where the market for the mixture of British and foreign is?—I have heard occasionally of very cheap whiskey and very cheap rum being sold in Australia, at the Cape, and places of that sort.

13515. What do they sell it as?—It reaches the natives as rum or whiskey.

13516. (*Dr. Horace T. Brown.*) As British rum?—That I could not tell. I should think it is sold as rum or whiskey.

13517. (*Mr. J Y. Buchanan.*) I suppose the natives would never take anything except the word "Rum"?—Yes. If it reached them as "mixed spirits" I do not suppose there would be any trade for it.

13518. Would the retailer on the West Coast of Africa give it over to the natives as mixed spirits?—No.

13519. That is outside?—Yes.

13520. (*Mr. Guillemard.*) On the whole you wish the privilege of mixing British and foreign spirits in bond withdrawn?—Yes, I think it would be a very good thing.

13521. I am very glad you have called my attention to it, because it is entirely a question for the trade as a whole, and anybody who sees your evidence and is alarmed by it no doubt will come and put his views before us here. I am obliged to you for bringing it out. With regard to the other thing that has been touched upon, the additional sweetenings, do you want any restriction made as to those?—No, I think they should be allowed and continued, as they are necessary.

13522. I am not quite certain whether your experience runs to this, but I think it does. Do you do any trade in liqueurs and cordials?—A certain trade.

13523. Foreign liqueurs and cordials?—Yes.

13524. The sort of things like absinthe, chartreuse and bénédictine?—Yes, they come over in bottles and are distributed here exactly as shipped.

13525. Do you find there is any spirit of that sort imported that is objectionable from a health point of view?—No, I never heard of any.

13526. You have no experience of any?—No.

13527. Would you have any suggestion to make as to the importation or sales of those liqueurs?—I do not think so. It is a very small trade, or a comparatively small trade, as far as I know.

13528. The importation?—Yes, the consumption of liqueurs is a small trade.

13529. The importation is in a few hands?—I am not sure about that. There are various liqueurs, but there are very few of them that have any great sale in this country.

13530. Then the other class of liqueurs and cordials, those made in England, which the Revenue calls "British compounds"?—Yes, cherry brandy, and those sorts of things.

13531. And rum shrub and orange bitters?—Yes, there is a certain trade in those.

13532. Do you have anything to do with them?—Yes, we make those.

13533. Have you any export trade in them?—We have a certain export trade in cherry brandy, but it is a comparatively small trade.

13534. Do you think the export trade generally is pretty small?—In British liqueurs, I should think quite small.

13535. Have you any views as to the compulsory bonding for two years—compulsory age before they can be delivered—of things of that sort?—Of course, for gin and other rectified spirits it would be disadvantageous to keep them in bond.

13536. I mean for the things we are speaking about—the British compounds?—No, I should say these liqueurs are mostly made from rectified spirits, and therefore there is no reason to keep them in bond. They are all made from rectified spirit.

13537. If the Commission recommended a period of compulsory bonding for other spirits, do you think they ought to be excepted?—I do not think it would matter very much. It is such a small trade comparatively.

13538. Then I ask you the same question as I asked you about the liqueurs from abroad. Have you any reason to think that any spirits of that sort are being sold which are dangerous to health?—I have never heard that they are.

13539. Do you think any restriction as to sale or preparation is required?—No, I do not think they are necessary.

13540. (*Dr. Bradford.*) With regard to the mixing of rum and foreign spirit for export, have you any reason to think that the mixture is prejudicial to health?—No.

13541. With regard to Mr. Guillemard's question, is there no evidence that some of these foreign cordials, absinthe, and so on, are prejudicial to health?—I have never heard that there is. I have nothing to say on that point.

13542. Have you no knowledge as regards inferior varieties of absinthe being prejudicial to health or as to any adulterated varieties?—No, I have only heard rumours. I do not really know on that point.

13543. You know that absinthe has been prohibited in some countries on account of its effects on health?—We do not sell it. I may say that I do not know that there is any demand for it in England. One never hears of it being sold in England. It is essentially a Continental drink. I have hardly ever heard of it being sold in this country.

13544. (*Dr. Cushny.*) What is the difference between Hollands and English gin as regards flavour and taste? Is there much difference in flavour?—There is a considerable difference. It has quite a different flavour.

13545. You do not think it necessary to keep Hollands in bond?—We believe it is a rectified spirit made in the same way as gin.

13546. I think one witness yesterday thought it would be better kept for a time?—No, I should not agree on that point.

13547. It is not done?—Of course, if it was a pot still product I would say at once, keep it in bond.

13548. We were told that it is pot still?—I have never heard that it is. I do not think it is. We have a very small trade in it, and we bought it from merchants for years, but I have never heard before that it is a pot still product. I have heard that it is a rectified product.

13549. They said that it was a pot still product?—I can find that out if the Commission would like to know.

13550. Is it supposed to be benefited by being kept?—If it is a pot still product it alters my view of it entirely.

13551. (*Dr. G. S. Buchanan.*) It is distilled four times in a pot still?—Then that takes all the flavour out of it.

13552. (*Dr. Cushny.*) You do not keep it, as a matter of fact?—No, we do not, but if you would like any evidence on that point I will write out abroad and get it.

13553. I think it would be very interesting if you would?—Certainly, I will do so.

13554. Then in regard to this mixing in bond of British and foreign spirits, do you know that that occurs?—I have no absolute evidence that that occurs. One does hear of whiskey, rum and other spirits being quoted for export at extraordinarily low prices. It is a well-known thing.

13555. (*Mr. J. Y. Buchanan.*) I want to ask you one question about gin and Geneva. Geneva has nothing to do with Geneva in Switzerland?—No.

13556. It really is a corruption of "juniper"?—Yes; it is the same as Hollands.

13557. It is really a corruption of "juniper"?—Yes.

13558. (*Dr. G. S. Buchanan*). Did I understand you that Jamaica rum was universally recognised as a better quality?—Yes.

13559 The word "Jamaica" has a very distinct trade value?—Yes, certainly.

13560. One would find that in trade circulars or wine merchants' lists?—Yes; you would find that Jamaica rum is quoted at a higher price than other rums.

13561. You told us about the description that you gave in connection with the sale of rum. I see you have five varieties of the same Jamaica rum, varying in price according to the alcoholic strength?—Yes.

13562. Then you have three others of different qualities and price according to age?—Yes.

13563. You were making a comparison between Demerara rum and the Jamaica rum in the matter of cost, which was 2s. a dozen bottles?—Yes.

13564. You were comparing there the Demerara rum of 25 per cent. under proof and Jamaica rum of 25 per cent. under proof?—Yes.

13565. I suppose by taking the lower strength that rather tends to minimise the difference?—Yes, it does.

13566. Now a question with regard to ageing. Is that under your own control, or do you buy it old?—We buy it generally about a year old when it comes over here. We buy different parcels and keep it here.

13567. So that the ageing is under your own control?—Yes.

13568. Do you, in the case of rums, state on your labels that they are bottled in bond—you do not in your catalogue?—No, we do not. Here are the labels (*producing same*).

13569. I was not here when you gave your evidence with regard to whiskey; but did you not state that in the case of whiskey you did make a statement on the labels that they were bottled in bond?—Some of our whiskies are bottled in bond.

13570. Do you consider that it would be of any advantage if you were in a position to do what some witnesses have urged, namely, to obtain an Excise authority for a label stating that the spirit either complies with a certain requirement or definition or that it has a particular age?—I do not think it would help us. We have stated it already, and have done so for years.

13571. The public in your case accepts your description as sufficient?—I think so; but I might say that we make no objection to it being done, and it might be an advantage in certain cases.

13572. The Chairman asked you whether you knew of any adulteration in regard to Jamaica rum, Demerara rum, and so forth. Have you any means of knowing what is done in Jamaica and Demerara with regard to that?—No.

13573. There is, as far as I have gathered, at present no control in Jamaica or Demerara or British Guiana in regard to the quality of the spirit, which seems to be left entirely to the distiller?—In Jamaica it seems rather different, because they have only one sort of still in Jamaica. It is all made in one way.

13574. That is as it has happened. It is not the result of any legislation or supervision?—I am not quite sure about that.

13575. We were told that that was the case. One witness who came before us said that in future they very likely would put up patent stills in Jamaica. How would that affect the position with regard to the description of Jamaica rum?—I cannot imagine anything more likely to injure the reputation of Jamaica rum than their doing that. I do not think it is likely.

13576. In the case of your own Demerara rum do you ask for any guarantee that it is a pot still product, or do you know whether it is a pot still product?—I think ours is a pot still Demerara.

13577. Do you make any stipulation about it?—It is a very, very small trade, and it is infinitesimal compared with the other; but we do buy it on the market, and we buy it in competition. Whenever we want any Demerara rum we select the best, and I have no doubt whatever that it is pot still. We never thought it necessary to give a guarantee with Jamaica rum as being pot still.

13578. Do I understand you buy your gin or that you make your own gin?—We buy the patent spirit rectified, and then we make our own gin at our distillery in London.

13579. Do you ever produce for rectification grain spirit such as is used in certain classes of whiskey, for example, grain whiskey?—We buy it in London, and it is called rectified spirit. There is very little difference between that and Scotch.

13580. Do you rectify?—It is rectified at our place.

13581. You buy a London patent still grain spirit?—Yes.

13582. Have you ever in the condition of the market found it advantageous to get Scotch or Irish grain spirit?—No, because it would not correspond with our labels. We say that it is London gin, so we could not use Scotch grain with it, but we confine ourselves to London just the same as with the Scotch whiskies that we use we always use Scotch grain in the blended whiskies.

13583. Do you consider it important that the spirit from which you make your gin, and which you rectify, should be obtained wholly from corn, or do you think it does not matter?—We should be very sorry to make the experiment with any other spirit than that which had been made from corn.

13584. We had yesterday several witnesses who were concerned with gin distilling who one after another said that they regarded it as essential that gin should be a rectified spirit obtained from corn spirit. Would you agree to that?—I would not like to go as far as that because I have no experience. I could not answer on that point.

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13585. (*Dr. Horace T. Brown.*) I understand you to say that you do not agree that West Indian rum should be mixed with British spirit in bond. Was that your contention? Am I right in that?—Yes.

13586. We have had it in evidence incidentally from Mr. Peters that there is a very large business of that kind going on for export trade. You are aware that those spirits, when exported, are sent out described not only as "mixed," but as "British rum." Do you think that that is legitimate?—Wherever they are sold I am afraid they do not reach the public as British rum.

13587. The evidence was that these go to Queensland and British South Africa, and are there described as British rums?—When we get to Australia the word "British" is left off, and it reaches the public as "rum." They drop the word "British." That is the evidence I have.

13588. But if the word "British" were retained, should you still have any objection to it being described as "British rum?"—No, I do not know that I should.

13589. Would it not be on all fours with British brandy?—Yes, or Spanish port, or something like that. I do not know of any trade in British rum. In Australia I never heard of British rum.

13590. It is a trade which runs in competition with the German trade. Germans, I suppose, use some highly flavoured rum to mix with their spirit and send it to those countries in competition with our British rum. Would you not be running a risk of destroying a perfectly legitimate trade?—I think the Colonies would help us in a question of this sort, and I do not think they would allow it to be cut into by a spurious article from Germany. I think we could depend on their assistance there.

13591. Is it not British rum *versus* German rum?—Looking at it from the Jamaica point of view, it is very unfair that it should reach Australia at a very low price as rum, when probably 90 per cent. of it does not come from the island at all. I think we ought to stop that.

13592. We are not speaking of it as "rum," but as "British rum." Would you have any objection to the word "British" being retained?—Not if it was sold as British rum in the Colonies. I should not have the smallest objection to that.

13593. (*Mr. J. Y. Buchanan.*) Have you ever in your practice come across what is called white rum?—Yes.

13594. White—that is colourless?—Yes.

13595. Do you know where that comes from or how it is made?—Naturally all rum, when it is distilled, is white, and then it is coloured.

13596. Coloured to sample?—Yes. I see on looking at our catalogue that we sell white rum.

The witness withdrew.

Mr. R. C. W Currie.

Mr. Reginald Charles Wilford Currie, called.

13597. (*Dr. Bradford.*) You are the managing director of Tanqueray Gordon and Co.?—Yes.

13598. What is the nature of your business?—We are general rectifiers and cordial makers.

13599. Your business has been carried on for a considerable time?—Yes.

13600. How long have you yourself been connected with it?—I have been connected with the business for about 27 years.

13601. What is your definition of "gin"?—I define "gin" as being a highly rectified spirit, made solely from corn and distilled with juniper berries and other herbs.

13602. Would you amplify a little what you mean by corn?—Cereals.

13603. Do you think it is advisable to place any restriction on the materials that are used in the manufacture of gin?—I think all gin ought to be made from corn and corn only.

13604. For what reason?—That I think the other spirit, which is not made from corn, does not quite come under the category of what is known as gin.

13605. Gin spirit is highly rectified, is it not?—It seems to me it is highly rectified.

13606. You think, notwithstanding that, that the materials should be specified?—Absolutely.

13607. Do you regard it as essential that juniper berries should be used?—Yes, entirely.

13608. Is there anything prejudicial in using essences?—If you use essences you do not make what is known as gin. It would make a great deal of difference.

13609. Do you mean that the flavour is not the same?—Yes, the flavour is not the same. The berries should be distilled.

13610. Have you any knowledge of gin being made from rectified spirits and essences?—Not absolutely; but I do not know that I am quite in a position to state.

13611. You have no positive evidence on the subject?—No.

13612. Do you think that gin should be bonded for a length of time?—No; there is no necessity whatever, because it is too highly rectified to be of any use at all. There is no necessity for bonding spirits from which gin is manufactured.

13613. You think that any restriction placed on materials should apply to British and foreign spirits alike, do you not?—Yes.

13614. (*Dr. G. S. Buchanan.*) In your definition of gin does it matter whether the necessary rectification is obtained by a single distillation, such as a patent still specially so arranged, or must you first get a spirit and then rectify it?—You must get a spirit and rectify it in order to get the rectification.

13615. You regard the subsequent rectification as absolutely necessary to make it satisfactory?—Yes.

13616. Would you go so far as to say that any spirit that had not been subjected to a separate rectification like that should not be called gin?—No.

13617. Can you tell us from your experience whether there is on the market, either for home use or for export, some very cheap gin which could hardly be assumed to come up to your definition?—No; I do not know that I can, absolutely. I do not think I have come across any. There are gins and gins, and each distiller has his own way of manufacturing, and some gins are what we should call better than others.

13618. It was suggested by some of the witnesses who were here yesterday that it was possible that with some kinds of cheap spirits sold as gin you might have had practically no rectification if you started initially with a good highly rectified spirit?—Yes.

13619. That you simply added strong flavouring essences to that and sold that as gin?—I should not call that gin.

13620. I do not know whether we have on the notes what the difference between sweetened and unsweetened gin is. Could you tell us that?—It is adding sweetening to it.

13621. In the form of sugar?—Yes, in the form of sugar.

13622. What is the meaning of Plymouth gin?—Plymouth gin is a gin made in Plymouth. Nobody has yet been able to find out how the flavour is obtained or make gin of the exact flavour. It is a speciality made by the distillers there, and I do not believe anybody has ever been able to find out exactly what its flavouring is.

13623. Is it made by one distiller or many?—I think it is made by one distiller only. What is known as Plymouth gin is made by one distiller.

13624. I gather you think it is important that the material from which the spirit is made should be restricted to corn?—Yes.

13625. Have you any knowledge of the use of molasses spirit?—Not for making gin. I do not know that you can make gin out of molasses.

13626. What would happen if you rectified it? Could you do it?—It would be totally different entirely.

13627. Some of the witnesses yesterday told us that you wanted something more than pure alcohol for your gins, and that you wanted a certain amount of bye-products, although those were very small?—Yes.

13628. Would you take that view?—In the analysis I suppose there would be a certain amount of bye-products, but that would be very small.

13629. It was said that if you rectified to such an extent that you had nothing practically but alcohol, you would not make a satisfactory gin?—That is quite right.

13630. That is your view?—Yes.

13631. You, besides making gin, make compounds of one sort and another—liqueurs?—Yes.

13632. Can you tell me whether there is any restriction at all by the authorities on the terms used in describing those cordials and liqueurs?—No, I think that taking it generally the British made is called cordials, and the foreign is called foreign liqueurs.

13633. For example, could a British compounder make Curaçao and call it Curaçao?—Yes.

13634. Could he make a compound and call it by the name of something which ordinarily suggests a foreign origin—Benedictine, for instance?—I do not think there is anything whatever against our making Benedictine or Chartreuse.

13635. That is a matter between you and the importers, but I mean as to any control by any official authorities?—No, none.

13636. Or is there any control as to what ingredients are put into cordials?—No.

13637. You have not to satisfy any health authority that they are harmless?—No, we make all the cordials from the fruit and the essences of the fruit.

13638. (*Dr. Horace T. Brown.*) Is the basis of those cordials highly rectified spirit?—Yes.

13639. I understand that highly rectified spirit should still contain a certain amount of flavour of its own?—Yes.

13640. I think you have stated already that it should be perfectly pure alcohol?—It would have to be absolutely pure alcohol.

13641. And that is why you would like to see the manufacture of rectified spirit for gin making restricted to corn?—Exactly.

13642. (*Mr. Guillemard.*) You told Dr. Buchanan that at present there were no restrictions on the materials in the manufacture of these British cordials. Do you want to see any restrictions on the materials?—No, I do not want any restrictions.

13643. Do you do any business in foreign liqueurs that are imported from abroad?—Very little.

13644. Do you want any restrictions there?—No.

13645. Do you want any restrictions of that nature for the sale of them?—No.

13646. With regard to Section 69 of the Spirits Act, 1880, that is the section that allows the addition of sweetening or colouring matter or other ingredients to spirits in bond for export and not for home consumption, you know it has been suggested to the Commission that that should be repealed?—Yes.

13647. I see from your *précis* that you are opposed to any alteration of the concession that would deprive rectifiers of their existing facilities under this section?—Yes.

13648 You are a rectifier, I think?—Yes.

13649. But you have no objection to the word "distiller" being struck out of the section if the Commission consider that thereby prejudice abroad could be removed?—Yes.

13650. You are not distillers?—No, we are rectifiers.

13651. I know there has been a certain amount of discussion about this in the trade lately. Does the view as expressed in your *précis* represent your own views, or is it the result of conferences between yourself and the traders?—It is my own view, and, I think, that of the traders.

13652. You think, speaking generally, the rectifiers and compounders would wish the privilege preserved, and that if distillers liked voluntarily to ask to be taken out of the section you have no objection?—No, not so long as we rectifiers are left in.

13653. I do not think anyone would have objection to the distillers taking that course if they wished to?—No.

13654. Have you any views that you would like to express on the question of the mixing of British and foreign spirits in bond?—No, I do not think I have any view on that.

13655. (*Mr. J. Y. Buchanan.*) You were speaking just now about cordials. Do you include under the designation "cordials" ginger wine?—No; I should not think that would come under it. We do not make ginger wine.

13656. But there is a very great deal of ginger wine made in the country?—Yes.

13657. I do not think we have heard about that at all. In this country it is a very large alcoholic industry?—Yes.

13658. (*Dr. G. S. Buchanan.*) Can you tell me whether rectified spirit is utilised in the manufacture of British wines?—British wines are supposed to contain no alcohol—if by British wines you mean Stone's British wine.

The witness withdrew.

Adjourned to Monday, the 20th July, at 12 o'clock.

TWENTY-SIXTH DAY.

Monday, July 20th, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Sir D. Morris, K.C.M.G.

20 July 1908.

Sir DANIEL MORRIS, K.C.M.G., called.

13659. (*Dr. Horace T. Brown.*) You are, I believe, Imperial Commissioner of Agriculture for the West Indies?—Yes.

13660. And you have personally come in contact with the manufacture of rum indirectly in the course of your experience?—Yes. I cannot say that I appear here as an authority on rum manufacture. As the head of the Department of Agriculture, I have been associated with the industry by means of officers connected with my department, but as far as the details of manufacture are concerned I cannot claim that I am at all an authority.

13661. You have some official and semi-official papers to hand to the Commission?—Yes, I should be pleased to do so. One is a report on Jamaica rum, with a very interesting account of the manufacture by Dr. Cousins who has been lately appointed Director of Agriculture at Jamaica. Dr. Cousins has recently discovered a new method of improving different varieties of rum by reinforcing the liquors.

13662. You put those papers in?—Yes. (*See Appendix L.*)

13663. The first is entitled "West Indian Bulletin, Volume 8, No. 1, 1907"?—Yes. I would also like to put in a later report by Dr. Cousins published in the "Jamaica Gazette" of September 26th, 1907. This gives an account of the investigations on Jamaica rum that have been carried on during the last three years. Mr. Allan was employed as Fermentation Chemist to co-operate with the laboratory staff in the investigation of Jamaica rum. He was able to establish the general principle upon which the fermentation of the various products was based and to show clearly that the flavour of Jamaica rum to which the great variety in character and quality of the island spirits is due, was the result not of alcohol fermentation by yeasts, but to acidic and putrefactive fermentation by bacteria. It also remarks:—The high ether process as invented by Mr. Cousins for re-enforcing the ether content of rum by recovering the volatile acids left in the spent liquor from the retorts and returning them into the process was carried out on a commercial scale on six estates during the crop.

13664. That is for the production of highly flavoured rum?—Yes, particularly that. Mr. Cousins divides the Jamaica rums into three qualities, those used for local consumption in Jamaica, those that are used for consumption in the United Kingdom, and lastly, those that are used for export from this country to Germany, called highly flavoured rums.

13665. Should you be inclined to accept that classification? I ask you the question because Mr. Nolan was inclined to divide them into only two classes. What Mr. Cousins called the local trade quality was practically the same as the home trade quality for consumption in the United Kingdom?—I daresay Mr. Cousins divided those two merely for the sake of bringing the facts more clearly before the general public, but I should say that on a commercial scale there would not be such differences as there are between them and the highly flavoured German rums. The consumption in Jamaica itself is fairly considerable, it is something approaching about half a gallon of rum per head of population. This is not very large considering that rum is regarded as the wine of the country, and it is drunk by all the lower classes in the island.

13666. Are there any further remarks you would like to make?—I would be glad to assist the Commission in getting any further information with regard to rum in the West Indies. I may possibly be in a position which perhaps the Commissioners, or those coming before them may not be, in being able to bring before the Commission confidential and other reports that are sent in to my Department.

13667. I think I could indicate one or two points where such a course might be useful. In the first place with regard to these highly flavoured rums which are exported to Germany. We are told they are used for mixing with the ordinary spirits of the country manufactured from grain, and that these have a large consumption. We are also told that there are certain spurious rums, such as artificial rums, exported to this country, and the Commission would like some evidence as to whether these spurious rums which come to us from Hamburg are really flavoured with essences as they say they are, or whether the flavouring is the Jamaica rum of which we are speaking?—I believe there is an enormous use of the so-called flavouring materials that are not connected in any way with Jamaica rum; in fact, there is a large trade going on in these flavouring materials. They have been offered for sale to people in Jamaica, and, as I said before, they are in no way connected or flavoured with Jamaica rums.

13668. It seems rather an important point, because if you are sending from Jamaica some of these highly flavoured rums which come to us again mixed with the German spirit it removes to some extent the cause of complaint, that these rums should be admitted into this country at all?—You mean from foreign countries.

13669. Yes. It is by no means certain that these so-called artificial rums are really flavoured with your Jamaica high flavoured rum, and that is a point upon which you might possibly be able to get evidence for us?—I shall be very glad to look into the question and endeavour to get authentic information on the point.

13670. Whilst we are on the question of these highly flavoured rums, there is another point I should like to raise. Do you know of a book on the manufacture of rum written by a Frenchman of the name of Mons. Pairault? He appears to have been commissioned by the French Minister for the Colonies to go out to the French Antilles and study the whole question of rum manufacture. He appears to have visited all the rum manufacturing portions of the

West Indies. His results are incorporated in a book which is called "La Rhum et sa Fabrication," published in 1903. This purports to be a scientific and technical account of the rum industry generally, and the official account of it is backed up by the eminent principal of the Pasteur Institute at Lille, and therefore comes with some authority. I would like to draw your attention to a chapter on page 107 on Jamaica rums. He states in the first place that Jamaica produces a considerable quantity of rum which is exported almost entirely to the United States and England, where a good part is converted into whiskey. That is the first statement he makes. Then he goes on to talk about a kind of rum produced in Jamaica with a very high flavour and odour which he describes as German rum or "stynking" rum. These rums, he says, are exported almost exclusively to Hamburg, and on the spot in Jamaica command three or four times the price of ordinary Jamaica rum. Then he goes on to remark that the intense aroma of these rums is due to the use of certain extracts—the French word he uses is "sauces"—into the composition of which enters skin which has been a little heated or steeped for a short time in tanning pits, and also a small quantity of alcoholic infusion of tobacco. He goes so far as to give the name of the brand of tobacco which is used for the purpose. He further says that the same is true with regard to old rums. He says it suffices to examine, as he has done, white rum coming from the still to assure oneself that this rum is neither better nor worse than that which one gets in the rum manufactories of St. Pierre, and that this rum in ageing naturally can give neither "stinkyng rum" nor the greater part of the rum sold at a very high price as old rum—inferring that these very old rums are doctored in point of fact. Further, he says at page 113, that the new rums are very good—that is, the Jamaica rums—without being superior to a number of the Martinique rums, but those for exportation are often coloured and have extracts added to them. All of them recall absolutely those terrible products to which the name of "rum" is applied in France. I thought it right to call your attention to these remarks, which are certainly very extraordinary, with regard to Jamaica rums, in order to give the opportunity of their being refuted?—I have never heard of these statements before, and I think that what Mr. Cousins has already published, and what I think he has in hand at the present moment can be placed before this Commission to refute the statements quoted. I have served in Jamaica for several years. I have visited a large number of estates and know the methods of manufacture, and I have never heard of anything of the kind being utilised in any way. In fact, I should say that the gentleman quoted was more interested in injuring Jamaica rum as opposed to the Martinique rum. He seemed to be taking up the position that Jamaica rums could not be better than the rums made in the French Colonies. I have no hesitation in saying that we could produce evidence to place before this Commission that would entirely refute the statements made in the book referred to. (*See Appendix M.*)

13671. I think it is very desirable that you should call Mr. Cousins' attention to that?—I shall be glad to do so, and to ask him to send in a statement bearing directly on the statements made in the book. It is certainly a very extraordinary series of statements to make with regard to a product that has been so long before the public. I know in Jamaica they have simple and primitive ways of doing things, but I am satisfied that there is no doctoring of the rum in any shape or form beyond the colouring which is usual. The maturing of the rum is a natural process. They have been producing rums specially for the purpose of early maturity—rums that will mature within a short time.

13672. The object of Mr. Cousins' recent work, I suppose, is to use a process which gives a very large amount of esters?—Yes. What he wants to do is to reinforce the percentage of ethers in rums that have hitherto been weak in them, and on that account have not obtained such good market prices as they might.

13673. I think he has been able to find a ferment which will work in a very acid medium?—Yes.

13674. That is a condition under which the largest amount of esters would be likely to be produced?—Yes. He has established that there are two kinds of yeasts. There is a splitting yeast, and a budding yeast, and he has found that the use of these is important in producing different qualities of rum. Then, another point Mr. Allan has enforced is the influence of bacteria. This is the first time that Jamaica rums have been treated from a purely scientific point of view, and Mr. Cousins has been able to win the support and co-operation of the planters in such a way that within the next two or three years I believe he will be able to place the Jamaica rum industry on such a footing that its value will be enormously increased.

13675. I remember very well the discovery of the splitting or fission yeasts?—The splitting yeast and the budding yeast are now well known and have improved the produce of the different classes of rum. Then there is another point, namely, that the quality of the spirits is due to the acidic and putrefactive fermentation by bacteria. I believe that is an important point established in connection with Jamaica rums.

13676. It is a symbiotic fermentation?—It is. A new man, Mr. S. F. Ashby, late a Carnegie Research Fellow and Bacteriologist at the Rothamsted Experimental Station, has been appointed to take up the combined duties of bacteriologist and fermentation chemist, and he is devoting himself to the isolation and study of the individual organisms at work in estate materials, and to the investigation of the comparative value for alcohol production and flavour of the yeasts and other organisms thus obtained. I believe within a year or two we shall have such a statement with regard to the manufacture of Jamaica rum that will place the matter before the public in an entirely new light. At the same time it will not injure the trade in Jamaica rum, because it is considered that the local conditions in Jamaica are such that no other country can produce rums of exactly the same quality. I have pleasure in handing in this report. As mentioned by Dr. Cousins, a further paper is in hand, and will be published, I hope, in time to be placed before this Commission.

13677. (*Dr. G. S. Buchanan.*) If, after we have had the opportunity of studying some of these papers you have kindly put in, there are any further matters on which the Commission desire information when you have returned to the West Indies, you would be able perhaps on communication to let us have observations on them?—I shall be very pleased. It is desirable to take steps at once in reference to the statements made in Pairault's book, and I shall also look more fully into the matter now that I know what kind of information may be required by the Commission. I have only lately arrived in this country, and I was not aware that the Commission were likely to deal with Jamaica rum or West Indian rum, and therefore I was not in a position to do full justice to my subject.

13678. You are helping us very much. Could you tell me if Mr. Allan's work that has now been continued by Mr. Ashby is work for the Jamaican Government or is it work for the planters?—The Department of Agriculture in Jamaica is maintained by the Government. Mr. Cousins and Mr. Ashby are Government officers, but they work, as we all work in the West Indies, in entire co-operation with the planters.

13679. That is, their work is for Jamaica and at the expense of the Jamaican Government?—Yes.

13680. It is not for the West Indies as a whole?—No. I am speaking now of Jamaica only.

13681. And, of course, it is all in regard to the particular form or forms of distillation which obtain in Jamaica?—Yes.

13682. Pot still?—Yes. It is all pot still distillation there.

13683. Is it any part of the work of your department to take any administrative action to see that particular substances are not used, or particular forms of adulteration do not take place in the case of Jamaica rum?—We would take up such matters for the purpose of giving information to the Government, but we would not go further than that except under sanction of a law.

13684. Could you tell me if there have been instances in your recollection or knowledge in which some particular practice on the part of distillers in Jamaica has been objected to or been drawn attention to?—

Sir D. Morris, K.C.M.G.

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I have been connected with Jamaica now for 25 years, and I have not heard of anything of the kind. I have heard once or twice of men putting the juice of pineapples into the wash for the sake of trying to get a superior flavour, but I have never heard at any time, and I do not believe that any of the practices referred to in Pairault's book, have ever existed.

13685. I was not thinking so much of the practice referred to there. The book is as new to me as it is to you, but I was rather looking at it from this point of view. We had Mr. Nolan here and other gentlemen who laid great stress on the importance of the differentiation in this country of Jamaica rum. The question in my mind is how far that differentiation is of advantage to the British consumer. I can understand it is an advantage to the Jamaica trader. There are considerable varieties of Jamaica rum, and perhaps you could tell me whether there is any sort of machinery available which would check any doubtful or unusual practice in Jamaica in the manufacture of Jamaica rum?—As far as I am aware there is no legislative enactment in force in Jamaica to provide for that at present.

13686. For example, do you limit ingredients in any way?—No, we cannot do that.

13687. You are not confined to molasses, for example?—No, not confined to molasses. For instance, there are a number of estates in Jamaica which make no sugar, they grind their canes and the juice is used entirely for making rum. The rum industry in Jamaica is more valuable than the sugar industry, and the greatest possible care is taken to prevent any Jamaica rum, that has a name in the market, from in the least degree being injured by any practice being adopted. The distillers are not likely to do that.

13688. For example, Mr. Nolan told us if you used molasses they would be exceptionally rich molasses. They would not be a third crop or something of that kind?—I think what he meant was that in Jamaica they manufacture what is called Muscovado sugar, that is, the common brown sugar. The molasses from sugars of that kind contain practically from two to three or sometimes 4 lbs. of sugar per gallon. In other countries where they have large factories they take out of the molasses what are called second sugars or third sugars and they leave no sugar in the molasses. I do not think they could use molasses with absolutely no sugar for making rum. It would be of no value to them. I think the point Mr. Nolan meant to make was that in Jamaica owing to the Muscovado process of manufacture of sugar being practically the only process there, there was a large amount of sugar left in the molasses, therefore the molasses would be used for making rums to a greater advantage than elsewhere.

13689. I understand that if any distiller in Jamaica were to use the inferior molasses—the molasses from which you have taken off your two crops of sugar, there is nothing to stop him from doing it?—There are no inferior molasses. They have few central factories, and therefore they do not make second sugars. The molasses drained from Muscovado sugars contain from three to four pounds per gallon of sugar.

13690. That is one of the circumstances which make Jamaica rum distinctive and give it a title to be distinguished?—Yes.

13691. That is one of the circumstances of the Island in regard to manufacture?—Yes, if they were generally to adopt the central factory system of manufacture of sugar in Jamaica they would probably injure their rum industry.

13692. With regard to this differentiation that Mr. Cousins made of rum for home consumption, rums for consumption in the United Kingdom, and rums for consumption on the Continent, the last is a special trade, as I gather, that has sprung up in consequence of the duty on spirits in Germany and so forth?—Yes, they have produced a rum of that character, in order to counteract the heavy duties in Germany.

13693. Can you tell me if any steps are taken in Jamaica in sending rum out of the island to differentiate these qualities in any way or to differentiate the home trade rum from the export to Germany rum?—The selection practically is made by the shippers. They know the qualities of rum that are suited to the different markets and they differentiate accordingly. Some large shippers in Kingston, for instance, may take the rum from half a dozen different estates. They know by experience what markets these various rums are suited for and they ship them to those markets.

13694. I understand, but I was asking whether they would, for instance, mark the casks in any particular way or be declared in any special manner in the invoices?—I am not aware of that.

13695. We have had the question whether these concentrated rums could be used in this country for mixing with plain spirits and be sold as rum. That was the reason of my question?—Quite so.

13696. Have you any regulation in Jamaica or in any parts of the West Indies as to the requirements regarding imported whiskey? I see Mr. Cousins in this article objects to some Scotch whiskey, that some of it is very recent, very fiery and very patent still quality. You have no requirements as regards that?—No requirements whatever. It is imported in bottle and it is simply bought on its merits.

13697. Do you approve of the action which has been taken over here to prevent the blending of Jamaica rum with other rum, such as Demerara or British Guiana rum, and calling it Jamaica rum?—I generally approve of the action, because it protects the industry. There was great danger of the industry disappearing altogether, and we have so very few industries left in the West Indies that we naturally wish to protect all we have.

13698. We were told that British Guiana had the largest output of rum of any of the West Indies?—That is so.

13699. Can you tell me what happens to that at all?—No, I cannot tell you. It is exported, I know, to the extent of something over three million gallons every year.

13700. To the United Kingdom?—Largely to the United Kingdom, but there is a gentleman present who will be able to give you information on that question.

13701. From British Guiana?—Yes. I may mention that the output from British Guiana is over three million, from Jamaica it is only a little over one million, and yet the total value of the exports in both cases is the same.

13702. (*Mr. J. Y. Buchanan.*) You say in Jamaica the planters make the brown sugar—the Muscovado?—Yes.

13703. That is the only sugar they turn out?—Yes, except in very few instances.

13704. What remains, what is strained from that, is the molasses which you say contains as much as three or four pounds of sugar per gallon?—Yes.

13705. That is, I suppose, what is used for making rum?—Entirely. I may add, as I said just now, there are some estates in Jamaica where they do not make any sugar; the juice from the canes is utilised right off for making rum. They have not got the machinery for making sugar, but they have the pot stills for making rum.

13706. What amount of sugar will that juice contain?—You mean what amount of sugar in the juice?

13707. Yes, to compare it with the molasses that they take out?—It may be as much as some 10 or 12 per cent., perhaps more. It depends on the quality of the canes.

13708. But if you take the molasses that come from the brown sugar, and if you work these molasses for further sugar, then the reason why a planter cannot make rum from the residue is that there is no sugar in it?—Yes; you cannot get fermentation in it.

13709. (*Chairman.*) As far as I can gather, the principal subjects referred to the Commission in respect of rum are two. First, whether it is desirable to require declarations to be made as to the materials, processes of manufacture, or preparation, or age of any such spirit. What, first, do you say on that subject? Do you think it is advisable to require in respect of rum any such declaration as I have read?—Would you suggest that being required from the Government or from the planters or shippers?

13710. Either from the manufacturer or the shipper. To require declarations to be made as to the material, processes of manufacture, or preparation, or age of

any such spirit, that is of rum that we are now dealing with?—I should think that it would not be desirable to do so unless to protect the industry.

13711. Who is to make it?—The shippers.

13712. To whom?—Possibly to the importers on this side.

13713. There are declarations. The importer has that by his invoice?—I do not know that I am in a position to express an opinion right off on a matter of this kind.

13714. Do you not think a merchant who is probably a common-sense business man will get what he wants, and the State cannot interfere between the shipper and the merchant and tell them what declaration should be made?—I think it would be far better to leave the thing alone as at present.

13715. The second thing we are enquiring into is requiring a minimum period during which rum should be matured in bond. What do you say?—I think it would be better to leave that alone also.

13716. Clause 2 of the Terms of Reference directs us to inquire by what means, if it is found desirable that any such restrictions, declarations or period should be prescribed, a uniform practice may be satisfactorily secured. As the witness says he does not wish any period to be prescribed, he cannot give us any information as to the method?—Might I be allowed to explain my position? As long as the country of origin is retained throughout that is all we, in the West Indies, wish to secure.

13717. I forget which Colonies you represent?—The West Indies generally; but in this matter I am specially interested in Jamaica. The country of origin is the essential point as far as Jamaica rum is concerned.

Mr. Ernest Tinne, called. *Mr. E. Tinne.*

13718. (*Chairman.*) There are two firms: Sandbach, Tinne and Co., Liverpool; and Sandbach, Parker and Co., Demerara?—Yes.

13719. Are you senior partner in both those firms?—I am.

13720. Are you also Chairman of the West India Association of Liverpool, and of the West India Section of the Liverpool Chambers of Commerce?—Yes, my lord.

13721. The business of your firm in Demerara and the West Indies is an old one?—Yes.

13722. Established in the year 1782?—Yes.

13723. How long have you been connected with the business?—I entered the firm in 1874.

13724. Have you estates in British Guiana?—The Demerara Company, Limited, and Plantation Leonora, Limited, whom I represent, have three, which comprise a great many smaller ones, which have been amalgamated into three larger concerns. The names are Great Diamond, Wales, which up to 1877 belonged to Mr. Gladstone, and Leonora; and then I am also a shareholder in the New Colonial Company, Limited.

13725. What islands are those in?—They are all in Demerara, on the north-east coast of South America, not in the West India Islands.

13726. What is your production?—All sugar or rum.

13727. Will you take rum first?—Rum, between 350,000 and 500,000 gallons a year; and about 27,000 tons of sugar a year.

13728. What proportion is that to the rest of the output?—It is about one-fifth of the export of British Guiana.

13729. What does British Guiana comprise?—The three counties of Demerara, Essequibo and Berbice on the north-east of South America. We are always considered commercially a part of the West Indies.

13730. I want your definition of rum?—I consider Mr. Aspinall's definition is exactly correct. It is spirit distilled directly from sugar-cane products in sugar-cane growing countries, and, I might add, whether it is produced in a pot still fired direct or a pot still heated by steam, or continuous still, or a Coffey patent still. There must have been a good deal of confusion, if I might say so, in the minds of Mr. Nolan and Mr. Heron as to what you call pot stills. More than 30 years ago I think the whole of the rum in Demerara was made in pot stills heated by direct fires. That, if I may say so without hurting the feelings of a Jamaica man, is, I consider, a dirty, wasteful and unscientific process. You are liable to get a residue in the bottom of the copper retort from distilling which exposes you to the burning of the copper. You have no proper means with direct heat of regulating the heat of your wash as you have in a steam still, and I think the return from that was not as good as we get at present from the vat or pot steam stills and Coffey stills. I do not altogether agree with what Sir Daniel Morris and, I think, Mr. Nolan said about the return from molasses in Demerara being worse, because we take more sugar out of the juice than they do in Jamaica. I do not think the rum need be any worse. You naturally get less rum from molasses containing less sugar, but that is no reason why the rum should be any worse.

13731. I understand that you are in favour, at any rate, of free action between the pot still and patent still processes?—Certainly.

13732. Which is most employed now in Demerara?—I do not think there is a single pot still heated by direct fire in Demerara. I believe there are many of them still in Jamaica, and also there are pot stills in Jamaica heated by steam. In Demerara there are several Coffey stills, and there is one of them on an estate from which for the last thirty or forty years one of the favourite kinds of Demerara rum on the English market has been produced.

13733. I am not going to enter into the relative merits between any particular kind of rum, Jamaica rum or Demerara rum, because I think that is outside our province, but I want your view on this manufacture of rum. Is it a pure product that is produced for the public consumption or is there any adulteration?—There is no adulteration whatever. Whether it is made in a fire still, or a pot still, or a Coffey still, it is made from identically the same materials, solely the product of the sugar-cane.

13734. What is the exact material from which it is manufactured?—It is made from the molasses which is washed off the sugar after it comes from the vacuum pan, and from the filtrations of the scum press. We do not put the skimmings of our cane juice after it is boiled into the wash as they do in more primitive countries. We pass the scum through the scum press and we take all the juice we can out of the scum and then what is left in the shape of scum cake is removed to the fields and used as manure. We use one item less than they do in primitive countries like Jamaica. We do not send the skimmings direct to the distillery; we use the washings of the buildings and the molasses from the sugar, and the filtered juice from the scum press. (*See Appendix M, I.*)

13735. Now as regards public health. As regards the advantage to the consumer, whatever the particular process be, does he get an equally pure unadulterated article?—Quite equally pure. As a matter of fact some of our customers, certainly in Canada and the West Indies, prefer the Coffey still rum to the pot still rum. The bulk of our English customers prefer the vat still.

13736. What is the average age at which rum goes to the market?—It goes not more than two months after it is made as far as we are concerned. We bring it to this country, and I cannot tell you what becomes of it afterwards, except that we have to provide the buyers with twelve months' storage.

13737. Does rum improve by being kept?—Undoubtedly.

13738. Is it injurious to drink it when it is quite new?—I could hardly say. Our native labourers drink large quantities of it without any apparent harm. The white people scarcely use it at all.

13739. I want to know as regards an ordinary person. We have heard that whiskey if it is drunk quite new is objectionable, but rum is not objectionable in

Mr. E. Tisne.

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any way?—I think it is considerably better when it is matured.

13740. What do you say as to whether it would be advantageous or not to require declarations to be made as to the materials, the processes of manufacture, or the proportion of materials and the age of rum?—I scarcely think any declaration is necessary except, as Sir Daniel Morris said, the certificate of origin. I do not think it would be necessary for the Controller of Customs in Demerara to require a certificate of the materials from which we make rum.

13741. As to the trade, as it is carried on now, it is made from one set of materials alone and is a pure unadulterated manufacture?—Yes.

13742. You see the evils that the declarations would guard against. Can you suggest any advantage from a declaration being made as to the materials in its manufacture?—I think if the certificate of origin gave the plantation from which it came then you would be undoubtedly safe. If it was merely spirit or so-called rum shipped from a Colony, and said to be rum, and the plantation could not be identified, it is just possible that someone might begin to distil either silent or artificially flavoured spirit.

13743. When you say the place of origin, does that mean an island or an estate?—An estate.

13744. Is not that rather an advertisement for the owner of that estate, that the rum should go forth into the world, if it did go forth into the world, with the mark of the estate upon it. It would give a good estate a good reputation and a bad estate a bad reputation?—It would not be any worse for having the Controller's certificate.

13745. Who would benefit by the estate being known?—It would prevent imitation spirit being sold as Demerara rum.

13746. Is there imitation spirit being sold now in practice as Demerara rum?—I am not aware of it in recent years, but about fifteen years ago the Controller of Customs in Liverpool asked the late Mr. G. R. Sandbach and myself to come down and look at some samples of rum, and we told him that in the best of our judgment they were not Demerara rum, but Hamburg rum made of potato spirit flavoured with some essence.

13747. Hamburg rum would be inferior?—Yes. As a matter of fact I once exported some Demerara rum to Denmark for the purpose of a firm there experimenting in making cherry cordial, and they found that it was far too expensive and probably far too good and they said potato spirit was better suited for their purpose.

13748. The evil of which you speak, and the only evil to be removed, as far as you know, has not existed for 15 years?—I am not aware of any recent competition in imitation rum, but it may have existed without my knowledge.

13749. Now assuming that a declaration is made, what declaration would you have? The first you say is the estate?—Yes.

13750. Whom to?—To the Controller of Customs.

13751. At?—British Guiana.

13752. The port of export?—Yes.

13753. What is to become of that declaration?—It would go, I should think, to the Controller of Customs at the port of import—it would go to the Controller of Customs where the stuff is imported, and he should take possession of it.

13754. That declaration is to go from the merchant at the port of exportation to the merchant at the port of importation?—Yes.

13755. And he sends an invoice to his purchaser?—Yes.

13756. Would that contain the name of the estate or not?—I think it would be very advisable that it should.

13757. Now a question as to the practice of the merchants. They know what they want. Should the importer ask for the name of the estate or not?—No, I do not think the importer would; he derives that information from the estate's mark on the cask. The reason I am a little uncertain about it is this, that in the case of Canada where our sugar enjoys a preferential duty now we have to give a certificate of origin merely to show that it is the sugar of a British Colony, not of any particular estate, and I think that certificate goes into the hands of the Customs, and the buyer can satisfy himself in that way that it is sugar from a British Colony.

13758. That goes from the Customs House Officer to the Customs House Officer, but that is not the case with this rum for there is no preferential duty here. You are dealing with the case of the exporter in Demerara and the importer in Liverpool. The customer in Demerara has your information as to the estate from which the rum has come. I want to know what is to become of that?—When I pay my duty on the rum in Liverpool I have to produce the certificate from the Controller of Customs in Demerara to show that it came from Demerara.

13759. Why?—For the protection of the consumer in this country.

13760. Is the State to enter into the question of the protection of the consumer when the importer does not want this statement? If the importer does want it you have that which you say ought to be a State declaration. If he does not want it why should the State demand what he does not want? What is the advantage to the State between Demerara and Jamaica rum? As to the course of business, what is the course of business that exists as to what Demerara sends in and Jamaica sends in?—The difference is so marked between Demerara and Jamaica that I do not think it is at all necessary to have certificates.

13761. Would it be known to an ordinary consumer which he was drinking?—I think so.

13762. Is not that the protection? If a man says he does not care what rum he drinks, is it material where it comes from? If he does care he asks for it and gets it. Is not that the protection?—I should think undoubtedly. I do not think anybody who is at all used to drinking rum could possibly mistake Demerara rum for Jamaica rum.

13763. Is there any rum that you think ought to have a declaration with regard to the estate from which it comes apart from Demerara and apart from Jamaica?—The reason I suggested it was to protect us from imitation rum.

13764. Then it would come to this, that the only advantage would be to make more distinct which class of rum it was?—That is all.

13765. And as you very properly say, a skilled consumer could find that out for himself. Then the next item is what you say as to requiring by law a minimum period during which the spirit should be matured in bond?—I think you may safely leave that to the buyer, the wholesale spirit merchant. I do not think you need include the maker of rum in that. We make our sugar and we make our rum, and we get it to market and we sell it. The wine and spirit merchants may be quite safely left to deal with that. If a spirit merchant sold rum which was not ready for consumption he would not get a sale.

13766. Is there any particular reason for requiring that rum should have a longer period in bond than, say, port wine or sherry?—I do not think so.

13767. In your view, is it desirable that any restriction should be imposed upon the materials or the process to be used in the manufacture of rum?—I do not think it necessary—in the Colony.

13768. I was dealing with rum, that is the Colonial rum. Do you think it desirable in the interest of the trade, or for the protection of the public, that any restriction should be imposed upon the materials or process to be used in the manufacture of rum?—I do not think it is at all necessary.

13769. I do not wish to go into the question between Jamaica and Demerara. Professor Harrison, in his examination of British Guiana rum in 1894, gave his finding of the average proportion of esters. What are esters?—Flavours—natural.

13770. Are they natural impurities or what?—Natural ethers or flavourings, like bouquets in wines. It is very much—to use a common word in Demerara—what we call guts, which is a corruption of the French word "gout"; it is a natural flavour, or bouquet, or aroma.

13771. It is not an artificial flavour?—No.

13772. Where does it come from?—It comes to some extent from the exterior rind of the sugar cane in the process of crushing. The juice has a certain aroma about it, and molasses, too.

13773. Does that proportion naturally go in as it is used, or is it put in for the purpose of flavouring?—No, it goes in naturally.

13774. There is no impurity in it?—No, it is natural to the cane.

13775. I think you have given the proportion of esters in pot still rum as 65 and patent still—the Coffey still—at 56?—Yes. But I think in this memorandum which I was asked to put in by The New Colonial Company the difference surely is worked out inaccurately. It says: "Difference of 13·7 per cent. only." I think that should be a difference of 9 per cent. only.

13776. The difference between 56 and 65 is certainly 9. You say that pot still rum means spirits of a strength of about 46 over proof?—48½. With a Coffey still, of course, we could issue rum at a very much higher strength if we chose, but what we gain in strength we should lose in flavour.

13777. (*Dr. Cushny.*) I want to know about those vat stills. There is no live steam there at all, is there?—It is in a coil or a jacket, either a jacket to the pan, or a coil running through the wash.

13778. Does it go through any retort?—Yes, and a rectifier in addition to the actual still itself.

13779. You have a rectifier in addition?—Yes, we have both forms of still at the Great Diamond Estate—the Coffey still and the vat still—and they give appreciably no difference in the quality of the rum.

13780. In those proportions of ethers that you give here, are those vat stills or pot stills?—The 65 is a steam pot still, and the 56 is a patent Coffey still. There are no direct fire heated stills in Demerara now.

13781. That is a vat still with the rectifier?—Yes, and a coil and a jacket to heat the wash.

13782. (*Dr. Adeney.*) In the course of the distillation of your rum do you get feints?—Yes, if we ran the still too long we should get a large proportion of low wines or feints. It would make the rum either faulty or almost unmerchantable, with a large proportion of fusel oil or something of that kind.

13783. What do you do with the feints?—I think they are run away with the lees. I do not think we use them again like they do in Jamaica.

13784. Are they not run back?—The feints, to the best of my recollection, are not, but I do not like to be very positive about that.

13785. (*Dr. G. S. Buchanan.*) Would not they contain alcohol?—I suppose they would contain a certain proportion.

13786. (*Dr. Adeney.*) But you cannot tell what proportion?—I cannot speak with certainty about that.

13787. Can you speak of the Jamaica practice?—I know nothing of Jamaica. If the Commission were going to sit for another two months I should very much like you to take the evidence of our chemist, Mr. William Douglas. He is by far the best expert on the subject that I know of in the West Indies. At present we have sent him to Java, and he will be home about the middle of August.

13788. That, of course, we shall have to consider. Do you blend in Demerara?—No.

13789. (*Dr. G. S. Buchanan.*) Do you blend Demerara and Jamaica rum?—No.

13790. Is that done in this country to any large extent?—Not to my knowledge.

13791. It has been stated that it has been the practice, and that that was one of the reasons for the action of the Jamaica Government that we have heard of. Would you approve of it if the product was called Jamaica rum?—If it would help them at all I cannot see any objection on the part of Demerara.

13792. If Demerara rum is sold by itself without being mixed with Jamaica rum or other spirit, would you think it desirable that it should be called Demerara rum? Would it be any advantage from the trade point of view that it should be called Demerara rum?—I do not know. I imagine that they are entirely a different class of customers, just as different almost as a person who drinks expensive claret, and a person who drinks sherry, or something of that kind. Personally, I consider Demerara rum the more popular spirit of the two. You cannot sell the same quantity of Jamaica rum that you can of Demerara. You can sell the Jamaica rum at a higher price, but you cannot sell it in any quantity. Just in the same way you cannot sell any quantity of Demerara grocery sugar, it commands a market, but it is a limited market. If we could flood the market with 25,000 puncheons of Demerara rum, and attempt to pass it off for Jamaica rum it could not be sold. I think the people who buy Jamaica rum could not consume it.

13793. As I understood it, the grievance of the Jamaica people was that the Demerara rum was mixed with Jamaica rum and sold as Jamaica rum. That, I understand, you would not consider a desirable thing?—I think it would be a dishonest thing to do. I do not know anything about it, and I have never realised that that was done.

13794. Which is the higher price now, the Demerara rum or the Jamaica rum?—Mr. Trotter, of Messrs. Thomson, Hankey and Company, who is here, could probably tell you about the price of Jamaica rum, but as a rule I should say Jamaica rum was 1s. 6d. or 2s. a gallon more than Demerara rum.

13795. The ordinary price of Demerara rum being what?—Two years ago it was 1s. 3d., and now it is 3s. 6d., the highest it has been since the Crimean War, and that is owing to a variety of reasons.

13796. Has the price of Jamaica rum in excess of that of Demerara rum been maintained under these circumstances?—I cannot tell you, but it is readily ascertainable from a circular.

13797. Do I understand that you agree with Mr. Aspinall's definition of rum as a spirit that is made from the products of the sugar-cane?—Yes.

13798. You think it would be reasonable to define rum in that way in the interests of the British consumer?—Quite reasonable.

13799. You were asked a question about restrictions. If we were to define rum, as Mr. Aspinall defines it, and you would define it, we would, in a sense, be placing a restriction on the materials used, and the processes used in the manufacture of rum, or at all events, in the materials?—Yes, you would certainly.

13800. You think to define rum in that way would be an advantage to the consumer, because for one reason it would distinguish rum from the imitation rum that you have been speaking of?—Yes.

13801. You were asked about the importation of imitation rum. Do you know the figures with regard to that?—No.

13802. There has been a quantity varying between 10,000 and 14,000 gallons of imported and duty paid rum spirit imported each year between 1903 and 1907 which has been marked "Imitation Rum" in accordance with the Customs requirements?—Yes.

13803. It is a comparatively small amount, but there is a definite importation?—Yes. We ourselves were offered some years ago some Hamburg essence, but I never got a sample of it—which, it was said, would give an admirable flavour to rum. We did not think it worth trying the experiment, or did not wish to.

13804. Rum essences are advertised in various essence makers' catalogues, are they not?—Yes.

13805. To return to the imitation rum, you have this amount of imitation rum, which is marked "Imitation Rum," according to the action which the Customs have taken, coming in every year as imitation rum?—Yes.

13806. Do you think it is an advantage that it should continue to be called imitation rum, or would you like it to be called rum and leave it to the trader and the trade and the taste of the public?—No; I think it is safer to call it imitation rum in the same way as margarine and butter are differentiated. You do not leave it to the consumer to find out that it is margarine.

13807. I gather, although the cases are not quite parallel, you would have no objection to the distinction being continued as regards Jamaica rum?—Not the least.

13808. In fact, these distinctions which are now already made by the Customs, are in the interests of satisfactory trade?—I think so.

13809. I suppose you would go as far as this: that if they could be passed on to the public, and you could be sure of them, it would be in the interests of the

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consumer?—I think so, if the certificate of origin could be passed on to the consumer, it would be in their interest that it should be so.

13810. (*Chairman.*) Why?—He would be sure of getting what he asked for. I do not think I should make a mistake.

13811. You told me the consumer did not want it?—I do not think he does really need it, my lord.

13812. (*Dr. G. S. Buchanan.*) The action of the Jamaican authorities, I understand, is resulting in this: that the public, when it asks for Jamaica rum, is more certain to get Jamaica rum than it was before?—Yes.

13813. If a similar action could be taken with regard to imitation rum, so that imitation rum was sold as rum, would you think that satisfactory, or would you think it an advantage that this imitation rum should be sold as rum without any qualification?—No. I think it should be branded as imitation rum. In the same way as you brand imitation butter "Margarine," you should brand imitation rum "Imitation Rum."

13814. And, in doing that, if any recommendation could be made by this Commission, and assuming that we saw a means of doing it, we should have to do it by placing a restriction on the materials which were used in the rum, and on the origin of the rum?—Yes.

13815. That means we should have to have a definition of what might be sold as rum itself, which excluded imitation rum?—Yes.

13816. I am not quite clear about Barbados rum. Would you rather classify the Barbados rum with the Hamburg rum?—A small quantity of it. It is simply from what I read in the evidence previously given in this Commission that I became aware that a small portion of spirit was made in Barbados and artificially flavoured. I never knew it before.

13817. That is not an indictment against Barbados rum as a whole?—No; it is one small factory I believe.

13818. But the particular practice in some part of Barbados of making spirits of high proof and then artificially flavouring them?—Yes.

13819. (*Dr. Horace T. Brown.*) It is not from your own experience, but only what you have gathered from the evidence?—That is so.

13820. (*Dr. G. S. Buchanan.*) You have to keep your spirit for twelve months when purchased by the customer, if he wants it kept?—We have to allow twelve months' rent to the buyer in this country.

13821. Does the buyer generally avail himself of that storage?—No, I do not think he does. He frequently takes delivery of the rum much sooner than that.

13822. Do you get pineapple rum at all?—No.

13823. Do I understand that the vatted rums and the rums that are made in patent stills are usually mixed together before they come here?—No; we ship them off as made. We never mix them.

13824. The products of different stills are not mixed for exportation?—No, because if there happened to be a complaint about any particular shipment afterwards, we like to be able to identify it. We run all the distillation from a still into one rum vat and then we run it off from that into casks and number it, and, accordingly, we can always trace from what vat it came from.

13825. The vats would be large vats and contain the products of several distillations from several stills?—No; each vat receives a separate distillation, sufficient to make 50 puncheons each vat.

13826. Each puncheon is how many gallons?—100 gallons to the puncheon.

13827. (*Dr. Horace T. Brown.*) Do you produce any specially high flavoured rums in Demerara?—No, the only rums we produce are the ordinary coloured rum and a small proportion of white rum used in the colony.

13828. Nothing similar to the so-called Continental export rums from Jamaica?—No.

13829. Nothing analogous to that?—No.

13830. Have you ever seen this made?—No, I have never seen it made.

13831. (*Chairman.*) I want to ask you a question about this imitation rum. Is imitation rum introduced into this country now?—I do not know. I cannot say.

13832. Will you assume that it is. I suppose imitation rum, according to you, is not rum at all?—I believe not.

13833. You treat this imitation rum, as compared with rum, as you compare margarine to butter?—Yes.

13834. Most people call it a fraud or misrepresentation. The customer ought to be protected against it by the State in order to see that the truth is carried into effect in the contract?—Yes.

13835. This is not a question of imitation rum which is not rum at all, but this is a question between two different classes of rum. Do you think the same protection ought to be applied to protect the consumer between Demerara and Jamaica rum as between imitation rum and good rum?—I do not think it is necessary.

13836. You get the rum coming over with the certificate of the Controller of Customs to the importer. I understood you to say that the consumer ought to be protected, but how would you give the information between Demerara rum and Jamaica rum to the consumer at the bar of a public-house?—I do not see how you could. I think the local authorities have taken it up once or twice and prosecuted people for selling Jamaica rum as Demerara rum or Demerara rum as Jamaica rum, but I forget with what success. There was a case at Stockport some ten years ago, but unfortunately I was not able to lay my hands on it in time. The prosecution was abandoned.

13837. Was there any misrepresentation, such as that a man asked for one and was given the other?—Yes, I believe it was asserted that he asked for Jamaica rum and was given Demerara rum, or *vice versâ*.

13838. That might occur whether the bottle was labelled or not?—Yes, it might.

13839. Labelling it would not protect him against the false statement of the publican?—No.

13840. I should like you to work out how the label can protect the consumer against that. If you, as a practical man, can tell us, we shall be much obliged to you?—It is very difficult. I can give you a concrete instance. At an hotel in Wales, I was fool enough once to ask for a superior quality of claret to the cheapest on the list, and five minutes afterwards I happened to go out of the dining-room and I found that they were pasting the label of the superior claret on to a bottle of bad claret. In the same way, if they paste a label of Jamaica rum on to a bottle of Demerara rum I do not see how you are going to protect the customer very well.

13841. May I improve on your story? I heard of two gentlemen who were dining, and one ordered a bottle of 12s. wine and the other a bottle of 2s. wine, and they heard the order for both given as "send down two red."

13842. (*Dr. G. S. Buchanan.*) You have mentioned the case of butter and margarine. The whole protection of the consumer against getting margarine when he asked for butter rests on the system of labelling and on declaration?—I believe so.

13843. So that although a dishonest man might omit the margarine label just as your man did with his claret, yet in that case the label is a method that is substantially successful on the whole in protecting the consumer?—That is the best way he can do it.

13844. (*Chairman.*) In the case Dr. Buchanan has put of margarine and butter the man takes the margarine away with the label on it?—Yes, if he buys a whole package, about 7 lbs. in weight.

13845. But if you give a man a wineglassful of rum across the counter what has he to take away with him?—A glass of rum.

13846. The label, I hope, does not follow?—No. I think in the Stockport case the detective took away the bottle.

13847. Yes, if you buy a bottle that is so; no doubt you have the label with the bottle?—There is one thing I should like to say. I do not know whether it comes strictly within the reference, but it might interest you to know to what is due the large rise in the price of rum. It is partly due to improved

methods of manufacture that we get more sugar out of the juice, and consequently less sugar or molasses goes to the distillery, but it is due also to the fact that we do not make so much yellow grocery sugar, and we make more Canadian and American refining sugar. With yellow grocery sugar we make 50 gallons of rum, and with the refining sugar we only make 20 gallons. More molasses comes from the yellow sugar than from the brown sugar. Lastly, we make about half our molasses from sugar-cane into cattle food, and so we reduce the export of rum, and to that is due the increased price of it.

13848. The price of Demerara rum is very high?—Yes, the last sale was 3s. 6d., which is three times the price it was two years ago.

13849. It is the subject of sincere congratulation?—It is.

13850. (*Dr. Horace T. Brown.*) Your output is reduced, and the rise in price is mainly due to the causes which you have mentioned, which have reduced your output?—Yes. Of course, if Demerara proprietors lose their heads and begin making rum again and reducing the output of cattle food, rum would very rapidly drop in price. I am very happy to say that all the Demerara proprietors have had the good sense to write or cable their representatives to limit the output of rum to what it has been for the last two years, and therefore I hope we shall get a remunerative price still for it.

13851. It is really higher now than Jamaica rum?—I do not know the price of Jamaica rum at present, and one does not know how long that may last. I believe the Navy ran short of rum, and there came a sudden demand on us for it, and they used Demerara rum in preference to Jamaica rum, possibly because it was not so expensive. *Mr. E. Tinne.* 20 July 1908.

13852. (*Mr. J. Y. Buchanan.*) Is the cattle food profitable?—It is used in Australia, the Cape, and this country, and we cannot make it fast enough. That also has risen in price from £3 10s. to £4 10s. It is 80 per cent molasses and 20 per cent. powdered sugar cane.

13853. (*Dr. Adeney.*) That is the advantage you get from the Coffey still?—No, any still. Instead of using all our molasses for distillation we use it with powdered sugar cane, and we make this what looks like brown sugar dust, which is an excellent cattle food.

13854. (*Mr. J. Y. Buchanan.*) It is feeding the cattle with sugar?—That is so.

13855. (*Dr. Horace T. Brown.*) You do not import peat for that purpose?—No, I do not think peat has the same nourishing properties as the powdered sugar-cane. The other cattle food product is molassine, which is made from peat fibre and molasses; but I do not think peat fibre has the same nourishing qualities as powdered sugar-cane. Molassine sells at a higher price, but then I think they spend a tremendous amount in advertising it.

Mr. Henry Alexander Trotter, called. *Mr. H. A. Trotter.*

13856. (*Mr. J. Y. Buchanan.*) You are a partner in the firm of Thomson, Hankey and Co., West Indian merchants, established in 1720?—Yes.

13857. Is that firm in London?—Yes.

13858. Your business is chiefly connected with the West Indies?—Yes.

13859. And principally with Jamaica, Granada, Antigua, and St. Kitts?—Yes.

13860. Which has the greater part of your business?—It is about equal; Granada has a very big cocoa industry there.

13861. You receive imports of rum from Jamaica amounting to 5,000 to 6,000 puncheons per annum: that is equal to about 550,000 to 660,000 gallons?—Yes, about 110 gallons to a puncheon.

13862. What is the strength?—35 over proof.

13863. Is that the strength at which the rum is sold?—That is the basis on which we sell it.

13864. I mean rum in commerce. If you have a bottle of rum, is that about the strength at which it ought to be?—Not bottled. This is as it it shipped. It is reduced considerably before it is bottled, I imagine.

13865. What is the chief source of your rum: is it Jamaica?—Yes, Jamaica.

13866. And Demerara rum?—No, we have no shipments from Demerara.

13867. Or Trinidad?—No, we get very little from St. Kitts, which is the only other island we get it from.

18368. Is the rum which is made in the other islands consumed locally?—Yes, almost entirely.

13869. Is that consumed immediately after it is made, quite raw generally?—Very soon after, I should think.

13870. Is that rum that is locally drunk white rum or coloured rum?—Usually coloured. It is about half and half.

13871. What is your definition of rum?—I agree with the definition given by Mr. Aspinall on behalf of the West Indian Committee.

13872. That it is made from sugar-cane?—Yes, from the product of the sugar-cane.

13873. And from a sugar-cane country?—Yes.

13874. You distinguish Jamaica from other rums?—Certainly.

13875. For what reason?—A good deal, I think, is the soil, and more trouble is taken with the manufacture.

13876. As a matter of fact it commands a higher price in the market?—Yes. It does not at the moment, but it usually does.

13877. What would the price of Jamaica rum be now?—I do not think any has been sold lately, but it would be about the same price as Demerara—about 3s. 6d. or 3s. 8d.

13878. Not higher?—Not higher now.

13879. Has not Jamaica participated as much in the rise of prices the last few years?—The rise in prices has been considerable, but the shortage has not been so great in Jamaica. There has been a considerable shortage in Demerara rum.

13880. You say there are two classes of rum made in Jamaica, one of those the home trade rum. Is that home trade rum ever exported here?—Yes, drinking rum, for drinking in the island, or over here.

13881. Is that exported immediately it is made, or within a very short time?—A very short time.

13882. Do you consider it important that it should be kept here for any time before being drunk?—I think rum matures very quickly. I think the voyage has a certain effect on it, and it assists it to mature

13883. I think you say in that respect, do you not, that you do not get a higher price for four years' old rum than for new rum?—Yes, we have had occasionally a small quantity of old rum sent over, and have had a difficulty in disposing of it.

13884. There is no fancy for old rum?—Not first hand at any rate.

13885. How is that highly flavoured rum made?—It is made practically the same as any other rum, only a good deal longer is taken over the fermentation.

13886. It is said that the Germans import it on account of the high duties, and that it would not pay them to make the other rum. Is that highly flavoured rum much stronger in alcohol—a much higher spirit?—No, it is exported about 35 to 40 over proof. It contains a penetrating flavour and body which enables them to mix it with neutral spirit, and it goes through a larger proportion.

13887. Is that exported direct to Germany from the West Indies?—They send buyers out to Jamaica, but I think most of it comes to England.

13888. Is it just as it comes over to the German buyer, or do they do anything with it in order to improve it?—No, some of it is kept in London to mature.

13889. Do you know how it is sold in Hamburg?—No, I believe it is used for making liqueurs to some

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extent, but I think otherwise it is mixed with potato spirit.

13890. To make rum?—Yes, to make rum, I imagine.

13891. The rum you get in Germany in probably that?—I should think probably.

13892. That does not come under the name of imitation rum?—No, I do not think it comes back here at all.

13893. (*Dr. Horace T. Brown.*) Do you know as a fact that this highly flavoured rum which you export from Jamaica does not enter into the composition of the so-called imitation rum?—I could not say that, because I do not know personally what imitation rums are.

13894. We have been told that they are produced by the addition of essences to neutral spirit, and, on the other hand, we have been told that these highly flavoured rums are used in Hamburg for mixing with neutral spirits, and the question is whether those come to us as imitation rums?—I could not tell you that.

13895. (*Mr. J. Y. Buchanan.*) Are you of opinion that it would be right to require declarations to be made as to the materials of which the rum is made, or the process of manufacture, or the preparation, or the age of it?—I think the definition that it is made from the product of cane covers it.

13896. But you would not be in favour of requiring any declaration with regard to the material?—No. I understand when it is imported it is as Jamaica rum, or other rums as the case may be.

13897. And you think there would be no advantage in requiring a declaration of the materials used in its preparation, or the process by which it is prepared?—No, I do not see any reason.

13898. Or the age in selling it?—No.

13899. You would not recommend regulating the minimum period during which the rum should be matured in bond?—No, I do not see any necessity for it.

13900. (*Mr. Guillemard.*) With regard to your definition of rum, you would include the product of both the patent and pot still as rum?—I should. It always has been considered so, and I see no reason not to do so.

13901. (*Dr. Horace T. Brown.*) Are you conversant with the processes of manufacture used in preparing the highly flavoured rums in Jamaica?—Only roughly, I am afraid.

13902. Were you present in the room this morning when certain extracts from M. Pairault's book were read out?—Yes.

13903. Are you prepared to deny the truth of those statements?—I do not manufacture myself, but I should certainly deny it. I have no doubt those statements are inaccurate.

13904. Do you think there is any foundation in fact for those statements?—I think not.

13905. As far as your knowledge goes, you think not?—Yes; I think somebody got at him.

13906 (*Dr. G. S. Buchanan.*) When you told us you thought no declaration was desirable, did you mean that to be read along with what you have told us about the definition, namely, that you would restrict the word rum to the product of the distillation of sugar-cane products?—Yes, certainly, and combined with rum from Demerara or Jamaica. That, I understand, is entered now in the Customs as Jamaica rum.

13907. I was not speaking, at the moment, of the Customs definition, but what should properly be sold as rum to the trade, to the public, and so forth. Would you limit rum in the way that Mr. Aspinall suggests?—Yes.

13908. To the extent to which it was limited, the declaration that a particular spirit was rum would involve some restrictions, would it not; for example, it would exclude the imitation rums?—Yes, certainly.

13909. Have you had rum essences offered to you on any occasion?—When I have been in Jamaica I have had them shown to me by planters there to whom the essences have been sent.

13910. You are aware that rum essences are quoted in the catalogues of essence makers—quite well-known firms some of them?—Yes, they are.

13911. You cannot tell us anything about their sale?—No, nothing. They are not used in Jamaica, of course. It would be a very curious article that was made with them, I should think.

13912. (*Mr. Guillemard.*) Is it a recognised manufacture by the people in Jamaica concerned with the trade?—No, not at all.

13913. I thought you said in Jamaica you have seen them?—Yes, sent out as an advertisement to Jamaica.

13914. But you have never seen them made in Jamaica?—No; they never dream of making them.

13915. (*Dr. Adeney.*) Do you know anything of the composition of Jamaica rum as compared with Demerara rum?—I believe it contains more what they call ethers or esters.

13916. Is that difference distinctive? Is it characteristic?—There is a great difference generally between the two rums; the smell is different and the appearance is different. With Jamaica rum more trouble is taken in the manufacture, and the fermentation takes longer.

13917. You have no doubt you yourself could distinguish Jamaica rum from Demerara rum?—Certainly, as it comes over. If it has been doctored at all then I could not.

13918. Take a sample bought across the counter. Could you distinguish between Jamaica and Demerara? Suppose you asked for a glass of Jamaica rum and were given Demerara rum, would you be able to detect deception?—I think I should have a very shrewd suspicion.

13919. Supposing that, by improved processes of manufacture, the composition of Jamaica rum could be made uniform, or fairly uniform, similarly with Demerara rum, then the distinction could be made by chemical analysis?—Yes.

13920. And then, so far as rums imported into this country in bottle were concerned, the description on the label could be checked by analysis?—I think it is very difficult to get any analysis.

13921. Do you know anything of the brandy trade?—No, nothing.

13922. I may tell you that I am aware that at least one French firm did at one time, and doubtless still does, supply the British market with a bottled brandy of uniform composition?—Yes.

13923. And this gives the means of detecting fraud?—Yes. Would it not be possible for another firm to make a brandy containing the same ingredients?

13924. But it would cost them just as much to produce it as the other?—Yes.

13925. Do you think it would be possible to look to such a state of things with rum?—I do not think it would, because the quality is so different.

13926. The qualities of brandy are different?—Different estates make different rum.

13927. And the same thing may be said of brandy?—Yes. I should have thought it was impossible.

13928. (*Chairman.*) What is your knowledge, either hearsay or otherwise, of the trade done in this imitation rum?—I have heard of cases—it has been reported—that it has been sold as Jamaica rum and otherwise.

13929. Is there any substantial trade going on, do you think?—I should not have thought so now—I believe it is decreasing.

13930. You have not heard any reason for that?—No, nothing definite.

13931. How long is it since you heard that?—I have never heard anything definite, it has been merely suggestions.

13932. Where is it made?—This imitation rum?

13933. Yes?—I could not tell you.

13934. Is it made in the home country or abroad?—I should imagine abroad.

13935. How is it sold? Is it sold as imitation rum openly?—I am afraid I have no knowledge of imitation rum at all.

13936. Is it known at all whether there are frauds going on with this imitation rum?—I should have said not.

13937. You could not tell us where we could get any information as to whether any portion of the public is willing to buy imitation rum openly and pay a price for it?—I should think the rum dealers would probably be able to give you that information—firms like Messrs. Lamb or Messrs. Trower.

13938. You could not tell us whether there is fraud going on?—No, I could not tell you that.

13939. You know nothing about it being blended with anything else?—No, nothing.

(Adjourned for a short time.)

Mr. Henry Gore Hawker, called.

13940. (*Dr. Horace T. Brown.*) You are, I believe, a member of the firm of Messrs. Coates and Co. of the Blackfriars Distillery, Plymouth?—I am.

13941. You are licensed rectifiers?—We are.

13942. I think you have been a member of the firm for some years?—Yes, for twenty years.

13943. Your business is an old one, I believe?—Yes.

13944. When was it established?—About 1793.

13945. It is carried on on the site of an ancient Dominican monastery near the Barbican, Plymouth?—It is.

13946. Does your business consist entirely in the manufacture of gin?—Almost entirely. We do a little other business, but our principal business is in gin.

13947. You have a speciality in gin, have you not?—We rather pride ourselves that we have.

13948. Plymouth gin is something distinct from the ordinary gin?—Yes, it is quite distinct from London gin.

13949. You do not claim the exclusive right to the term "Plymouth"?—Not to the word "Plymouth" for gin, but to "Original Plymouth Gin" we do.

13950. That is registered?—Yes, that is registered.

13951. You sell both in bulk and in bottle?—Yes.

13952. The sales in bulk are only made in the United Kingdom?—Yes, we only export in bottle.

13953. Your product is sold at a certain strength, is it not?—Yes, we send it out at two strengths, but the bulk of our business is done at 22 under proof.

13954. You have some means of following the various bottlings of your gin, have you not?—Yes, we try to protect the consumer by the labels we issue. Perhaps I had better explain it. We sell in bulk in cask, and we issue labels and capsules for the bottler to use under certain conditions. The gin has to be bottled at the same strength as we send it out, namely, 22 under proof, and is to be identical as we supply it; and also we fix a price under which it is not to be sold.

13955. Could we have a specimen of the label?—Yes. (*Same handed.*)

13956. Under your system you can ascertain where and how and by whom any particular sample has been bottled?—Yes, we put on the label either a number or the name of the bottler, so that on reference to a book we can see to whom we supply the gin in case there is any complaint as to the quality or strength.

13957. The basis of your gin is, I suppose, a cereal grain spirit?—Yes, a cereal grain spirit.

13958. Which you rectify?—Which we doubly rectify.

13959. And flavour?—Yes.

13960. The particular method by which you do that, of course, is your own particular trade secret?—Yes.

13961. What is your attitude with regard to the proposal for legislative restriction on the use of anything but cereal grain spirit as the basis?—We should be very pleased to see it restricted to the use of corn only. Personally I think that gin is essentially a corn spirit.

13962. Have you any reason to think that gin is manufactured from spirit made from other sources than grain?—Not from my own knowledge. I have read the evidence given before this Commission.

13963. You do not think there is any molasses spirit, or any potato spirit, or anything of that kind used?—No, not in gin which should be so called.

13964. Then you would not like to see any attempt to compel disclosure of the process of manufacture?—No, certainly not the process of manufacture. Of course, I am not a distiller, I am only a rectifier. We do not manufacture our own spirit.

13965. But those objections would not apply to any limitations of the origin of the spirit?—No.

13966. What are your ideas with regard to the bonding of gin?—Gin to my mind is a spirit which by the treatment of double rectification has got rid of all impurities, and there is no need to keep it in bond.

13967. You think it does not improve by keeping?—Certainly not.

13968. And that it rather deteriorates?—Certainly. With our gin I should say it loses its flavour.

13969. The necessity of bonding of course would mean the locking up of a certain amount of capital to which you would object?—Yes.

13970. You do not think there is any reason as regards the public health why any bonding period should be established?—Not as regards gin. It is fit to drink as soon as it is made.

13971. (*Mr. Guillemard.*) I do not know whether you have followed the evidence that has been given before this Commission?—Yes. I have read the whole of it, I think I may say.

13972. The suggestion was made by one or two witnesses that gin could not be properly made except by the rectified spirit being actually distilled with the juniper berries and the other flavouring materials, as contrasted with the addition subsequently of an essence?—I should think it was necessary to add it during the distillation.

13973. Not added, but that the spirit should be actually distilled with the berries?—Yes, that is my opinion.

13974. Why do you think that? I mean what would be the grounds of your view? I will put it in another way. What would be the nature of your objection to this process, that is, to the addition to the rectified spirit of a gin flavouring which might have been specially prepared for the purpose by the distillation of the juniper berries and the other materials? What would be your objection to that? It is the same question put the other way round?—I am afraid I cannot answer any more than in the way I have done, that it is my way of making it.

13975. You approve of one and disapprove of the other?—Yes.

13976. You cannot put your reason into words?—No.

13977. I wish you could, because it would help us. You do not see your way to putting your reason into words?—No. If by thinking I can I will tell you.

13978. You have expressed the opinion that you would like to restrict the rectifier in the making of gin to the use of cereal grain spirit?—Yes.

13979. On what grounds have you expressed that opinion? Is it on the grounds of health, or simply on history of a long practice?—Both I should say.

13980. What do you think would be the nature of the objection from the consumer's point of view, or from the point of view of health, if instead of a cereal grain spirit there was used a highly rectified molasses spirit?—I have no personal knowledge of highly rectified molasses spirit, but I should think it would not have the quality. It would be a much rougher spirit than the cereal grain spirit. I have no personal knowledge of molasses spirit.

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13981. Do you think you would go so far as to say that molasses spirit, whether rectified or not, ought not to be used in the manufacture of British compounded spirits?—Of gin, certainly.

13982. You would like to exclude it altogether?—Yes. We have the assurance of the firm who supply us with grain spirit that it is not the product of molasses, only cereal grain, and we should always insist on that.

13983. Have you personally had any opportunity of examining any of the rectified molasses spirit?—No, I have not.

13984. I want to ask you this question, although it is rather outside your *précis*. Do you make any kind of British liqueur or cordial?—No, none at all.

13985. (*Dr. Cushny.*) Do you know anyone who keeps gin in bond? Is it ever kept in bond?—All our gin is made duty paid, and the gin that we export goes into bond, and we get a drawback on it.

13986. But that is not kept any time?—No. We have to pay the duty before we manufacture it.

13987. One witness told us that he thought it was a benefit to keep, not the gin, but to keep the alcohol for some time before adding the berry in distilling. Do you think there is anything in that?—No, I do not.

13988. You think it should be quite fresh alcohol?—Yes, as long as it is not absolutely red hot.

13989. What do you mean by that?—We like to get it so that just a short while elapses before we rectify it.

13990. You think there is some change goes on between the preparation of the grain spirit and your rectification, and you think it ought to be kept some time?—Not some time—I mean a week. It practically is ready for rectification as soon as we get it.

13991. After you have rectified your spirit and before you add the berries, do you think it has any flavour except alcohol?—I think there is a slight flavour. I think, perhaps, my opinion is not everyone's opinion. Patent still spirit is sometimes supposed to be absolutely without flavour. I think it has a slight grain flavour.

13992. This is not patent still spirit that we are talking of, but it is patent still spirit that has been twice distilled?—I am talking of it before it is rectified.

13993. After it is rectified do you think there is any flavour in it?—Yes, it has got this gin flavour, of course.

13994. But I mean if you rectify it before you put in the berries at all?—The course of rectification and flavouring goes on together.

13995. Do you take your grain spirit from the distillery and simply add your berries and distil it?—We add our berries and other ingredients, and it is rectified.

13996. It is rectified after putting in your berries?—Yes, that is our process of manufacture.

13997. You do not rectify before putting in your berries? I do not want you to give us any trade secret if you object?—I would rather not say. We have our special process.

13998. (*Dr. Adeney.*) You spoke of protecting your gin in two ways—quality and strength. You have that protection with your labels?—Yes.

13999. Of course the strength is an easy matter, but how do you test the quality?—That, of course, would be by the partners tasting it.

14000. Entirely by taste?—Yes.

14001. Not by chemical composition?—No. Of course, we have had our gin analysed. Of course, I quite follow you, it might be possible that inferior spirit might be added, but we should know how to detect that. We have only gone by the taste.

14002. You have not gone to any trouble, I suppose, to find out really whether your article is uniform in chemical composition?—No. We have had it analysed.

14003. Have you had a sufficient number of analyses to enable you to form any judgment?—No, I do not think we have. I think it is a thing we should do.

14004. I think it would be advisable if you did it?—I have here a copy of an analysis.

14005. If you would hand it in we should be glad to have it?—Yes, I will. (*Same handed.*)

14006. Do you regard the spirit itself as adding anything towards the flavour of your gin?—No.

14007. (*Dr. G. S. Buchanan.*) If the spirit adds no flavour to the gin, why must it necessarily be the product of cereals?—I should say myself because it would be more likely to have a body if made from cereals, and be a better spirit altogether.

14008. But the body would not be merely the alcohol but would consist of a certain amount of bye-products that would remain after rectifying? Unless it is going to remain after rectifying, I do not see that it is of any use to you?—No.

14009. As to your practice in regard to the purchase of grain spirit, is that to deal entirely with some one firm?—Yes, a Scotch firm.

14010. Can you tell me whether the grain spirit as made for you is different in any way from the ordinary grain spirit that is made at the distillery?—No, I do not think so. I wrote to the firm for a definition when I knew I was coming up here, and they informed me, not that it was specially made, but that it was a cereal grain spirit.

14011. In other words, it is Scotch patent still whiskey?—Yes.

14012. Could you tell me whether the price of it is substantially the market price of ordinary patent still whiskey in Scotland?—Yes, I should say so.

14013. I notice you say in your *précis* that gin is cheap in comparison with other spirits, and some of its popularity is doubtless due to that fact. Could you tell me how gin (which is Scotch patent still whiskey subjected to a double process of rectifying, which presumably costs something, and has the addition of flavouring matter) contrasts with patent still Scotch whiskey in the matter of price?—Our gin is more expensive than the London gin. Do you mean our own gin?

14014. Yes, take the case of your own gin. Can you compare that with a cheap whiskey?—Our gin is very much about the same price, roughly speaking, about 2s. 6d. a bottle.

14015. Although it has had, in addition, these additional processes in the flavouring?—Yes, but then it is weaker.

14016. (*Dr. Adeney.*) It is the lower strength?—Yes.

14017. Thirty-five under proof?—We can go to the lowest alcohol limit, but we do not.

14018. (*Dr. G. S. Buchanan.*) Is that at 2s. 6d. a bottle, 35 under proof?—Twenty-two under proof is the strength at which we stipulate it shall be bottled.

14019. Twenty-two under proof would be an ordinary strength for a whiskey. That would not be a very dilute whiskey, would it?—No. Is not ten under proof an ordinary strength?

14020. (*Dr. G. S. Buchanan.*) It is the sort of whiskey that would be sold at 2s. 6d. a bottle?—Yes.

14021. What would be the price per proof gallon without duty?—Under bond?

14022. Yes. In order to contrast it with figures we have had here about whiskey which have been calculated largely on the price per proof gallon, I want to ask you whether you could give us, for example, the ordinary price of your gin per proof gallon?—I could give you the price per case under bond, but that would be 22 under proof. It is 11s. 2d. a case. That is our lowest price.

14023. (*Chairman.*) What is in a case?—Two gallons.

14024. (*Dr. G. S. Buchanan.*) You told us that you considered it would be a great hardship to compel you to disclose your process of manufacture and the materials used, apart from the origin. I can quite understand the particular proportions of ingredients, and so forth, would be a thing that you would very jealously guard, but would you have any objection to the ingredients used being known if the case required it, or it was considered to require it by some Government authority, or some authority that was enquiring into the matter from public health reasons?—Yes.

14025. Even under those circumstances?—Yes, I think so.

14026. (*Dr. Adeney.*) Your price of 11s. 2d. per case is rather high, is it not, compared with some of the cheaper whiskies?—Yes. As I say, we are some way above London gin. We have to sell our gin on its merits.

14027. I notice you say that gin is, in comparison with other spirits, cheap, but you could scarcely say that of your own gin, could you?—Perhaps it would have been fairer if I had given you the price for gin duty paid as we supply it in England, and then have deducted the duty.

14028. Could you give us that price?—Yes. It is 11s. 8d. per gallon duty paid. That is subject to discount.

14029–30. (*Dr. G. S. Buchanan.*) That is at 22 under proof?—Yes.

14031. Would you consider that it is essential to the manufacture of gin that you should thoroughly rectify the spirit?—Yes.

14032. Have you any knowledge of the manufacture of gin without further rectification?—None.

14033. Have you any reason to believe that it is done?—Not to my own knowledge.

14034. Can you define the degree of rectification of gin in any way by any term?—I should define rectification as a process by which you get rid of any impurities. That is what I have always understood it to be.

14035. You would not get nearer than that?—We always think it gets rid of fusel oil.

14036. I want to ask you about these labels. You say that it can at once be ascertained who filled a bottle should any question arise about its contents. I do not understand that that would be the case with this label, which has only on it the name of the bottler. There is no system of serial numbers, or anything of that kind?—You mean as to the use of that label, that it is sent out to half a dozen different people.

14037. Yes?—We ask our purchasers to help us in every way by keeping a record themselves as to whom they send it out, so that we can trace it as far as possible, but, of course, we cannot always do it.

14038. (*Dr. Horace T. Brown.*) Is their name branded on the label in addition to your own?—Yes.

14039. (*Dr. G. S. Buchanan.*) Do I understand you to say that besides your own make generally there is a Plymouth style of gin?—There is one other firm who make Plymouth gin, but there is no other gin made at Plymouth except ours at the present moment.

14040. The other firm is not at Plymouth?—No.

14041. It makes a gin of the Plymouth style?—Yes, they call it Plymouth gin.

14042. The word "Plymouth" has a significance in regard to the flavour?—Certainly. I think if I might say so, all Plymouth gin should be made at Plymouth—the place of origin.

14043. (*Mr. Guillemard.*) As a matter of fact it is not?—There is one firm who make Plymouth gin elsewhere than at Plymouth.

14044. Do you see any possible analogy between that and Scotch or Irish whiskey, for instance?—Yes, it has crossed my mind.

14045. This is admittedly openly sold as Plymouth gin, and everyone knows that it is not made at Plymouth?—Yes, I should think so. I am not quite sure that abroad people who buy it as Plymouth gin are not under the impression that it is made at Plymouth.

14046. That is simple foreigners?—No, not foreigners. I am afraid foreigners do not drink our gin, but Colonials do.

14047. (*Dr. G. S. Buchanan.*) Surely nothing more would be said in describing Plymouth gin than the words "Plymouth Gin" in that case?—No.

14048. How would anybody over here know that it was not made in Plymouth? They would know perhaps that it was not your gin, but would they know anything more?—No.

14049. (*Chairman.*) Are there other persons at Plymouth making gin besdes your own firm?—No, no one else.

14050. Is there any advantage in having gin made at Plymouth?—We think so.

14051. What is it? It is made by Messrs. Coates and Co. I know, but the point is a geographical point. What is the advantage of making the gin at Plymouth?—To keep up the old idea, I imagine. You mean that we might as well make Plymouth gin in London?

14052. Yes, you say "Plymouth Gin" is apparently a valuable asset because the gin is made at Plymouth. I want to know what is the advantage of making the gin at Plymouth over making it at Portsmouth. Is it any better for being made in Plymouth?—If it was made elsewhere than at Plymouth I should say that it would be the same article, but we fancy that it is better made at Plymouth.

14053. Supposing your firm, Messrs. Coates and Co., went to Portsmouth and made the same gin, would it be any better or worse than if it was made at Plymouth?—I think myself that it might not be any different, but I think the purchaser would not think it was the same. I think they are very superstitious. If a man was buying Plymouth gin and found out that it was not made at Plymouth, he would immediately begin to suspect it.

14054. Where would the superstition come in if there was no advantage in it being made at Plymouth over it being made at Land's End or Leicester? Where would the superstition come in? They would know they were getting good gin from Messrs. Coates and Co., which is a well known brand, and they like your gin; but except to ear-mark it as being a gin made by you I do not see that the word "Plymouth" is of any use?—Of course, the trade mark of "Original Plymouth Gin," which we ——

14055. Yes, that is as to Messrs. Coates and Co., but what is the object of having this label upon your gin bottles?—We wish to impress on the public that, when they buy a bottle of gin with the label with the Friar on it, it is our gin as sent out from the distillery.

14056. That is the ordinary mark the same as Allsopps and Bass have, and they put on their trade mark to show that it is their manufacture?—Yes.

14057. And that is your object here?—Yes.

14058. I dare say you are right that your gin is very good gin, and you wish the public to know that they are getting that gin, but I do not see what the protection to the public is in this label any more than if you wrote the words "Coates and Co." over the bottle. You have "Coates and Co., Plymouth Gin." That is all that is wanted to be told. I do not know why you have "The Original Blackfriar," which has a curious expression, printed on it. What is the use of that to the consumer? Then you have a picture of three medals and portions of others which are Exhibition medals of 1884. Is not this really the ordinary trade mark to push your goods?—Quite so, but we thought it worth putting in the *précis* of evidence to show that we do try by the number on the label and the name to ensure that the consumer is getting it as sent out. We had not any other desire than that in putting it on the label.

14059. I want to know whether we can find anything to protect the consumer against a false description. I should not think this protects the consumer except telling him that this is Coates and Co.'s gin. You do not give him any particulars, and you do not tell him what it is made of or anything?—The only thing, as I have said, is that if anyone complains we have a means of checking it, and tracing it. I do not say that it is infallible, and I wish we could find out an infallible way.

14060. Where is your principal trade? Is it in London?—Our home consumption is in the West of England, and we have a large export business.

14061–2. I suppose in the West Country your manufacture has a local reputation?—Yes.

14063. What is your idea? Is it not competition with other manufacturers? If a man goes into a public-house, does he ask for Plymouth gin, or does he ask for any other gin, or does he ask for a glass of gin only?—In Devon and Cornwall he would ask for gin, and would expect to get Plymouth gin. Outside Devon and Cornwall it would be the other way round, and he would have to ask for Plymouth gin if he wanted our gin.

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14064. In Devon and Cornwall if he asked for gin he would be given Plymouth gin without asking for it?—Yes.

14065. Probably that is because the publican has got no other?—No, there is a certain amount of London gin sold in Devon and Cornwall.

14066. In Devon and Cornwall if a man asks for gin, why should the publican always give him Plymouth gin?—Because it has a reputation in Devon and Cornwall.

14067. What would the publican care for that? If the publican has two or three gins in his cellar, why should he take yours out? Is not the reason that he is dealing with you and having only Plymouth gin, and if a man asks for gin he gives him what he has got?—In Devon and Cornwall we are better able to compete in price with London gin, because we are nearer home. There is no carriage on it.

14068. That does not answer my question. I want to know why, if a person goes into a public-house in Devon or Cornwall and asks for gin, he gets Plymouth gin?—Plymouth gin has been the drink. Before whiskey came in it was always drunk everywhere.

14069. The publicans dealing with your firm locally have your gin to give a man who asks for gin?—To a certain extent, but he is not bound to sell our gin.

14070. Why, if the man asks for gin, does he give that man your gin?—Because the public appreciate it.

14071. Has he got others to give him?—In some cases.

14072. Why, if he is not asked for it, does he keep other gin?—Because he gets an occasional visitor from London who would not care for our gin and would ask for London gin.

14073. It speaks for itself. He is your dealer and deals with you, and has his bulk from you. Is not that so?—Yes.

14074. That accounts for it all. Out of Devon and Cornwall what is the custom that exists?—Out of Devon and Cornwall there is a large quantity of London gin drunk, and if anyone wanted Plymouth gin he would have to ask for it specially.

14075. What is the reason? Is London gin cheaper or what?—London gin is cheaper.

14076. Is there any difference in flavour, or any reason why they should out of Devon and Cornwall prefer a London gin?—No, I think the taste of our gin is an acquired taste. We have many customers outside Devon and Cornwall who have acquired a taste for our gin and will have it.

14077. Is there a peculiarity in your gin?—Yes, in the flavour it is quite different from London gin.

14078. It is a matter of use, and people get accustomed to one or the other?—Yes.

14079. As far as you know of gin manufacture, is it a pure product that is produced, or is there adulteration going on?—As far as we know I should say it was a pure product. It is very difficult to detect any adulteration.

14080. It is not a very high priced article, so would it be worth while to adulterate it?—Yes, it might be.

14081. But you do not know of any adulteration occurring?—No, we have not been able to detect it.

14082. Can you, with your practical knowledge, suggest any restriction that ought to be placed upon the sale of this commodity of gin either in its name or upon the ingredients that are used in the manufacture?—I am afraid I cannot.

14083. Do you think it is practicable to do it in the interests of the customer and in the interests of the public?—I have thought of that and I have not been able to think of any means of doing so.

The witness withdrew.

Mr. F. L. Teed.

Mr. Frank Litherland Teed, recalled.

14084. (*Dr. Adeney.*) You have already kindly assisted the Commission in their enquiry as to whiskey?—Yes, I have already been before you, gentlemen, but I do not know if my assistance amounts to very much.

14085. You have been consulted, I understand, with regard to the composition of Jamaica rum, have you not?—Yes.

14086. Would you tell us the particulars?—It is much higher in ethers than Demerara rum. I put in two tables formally which contain the results of my examination of the rums. (*See Appendix N.*)

14087. How many samples have you examined of Jamaica rum?—I think it was about 16.

14088. Were those all of Jamaica rum?—I believe so. They were all obtained from the docks. They had never been out of bond.

14089. Of course, you have analysed Demerara rum?—Only one sample, and that I am not certain was Demerara rum, but it came from a firm dealing in Demerara products. The sample was sent to me to determine the quantity of ethers in it. As it came from a Demerara firm I imagine it was a Demerara rum, but I cannot swear to it.

14090. Are the two samples that you refer to on page 1 in your *précis* two of the 16 samples that you mentioned?—No. If you notice, they are not from only two samples, but I have taken the maximum of the 16 and the minimum of the 16, eliminating two samples which, after taking them from the docks, were declared by experts not to be Demerara rum.

14091. Those were two of the 16?—Yes.

14092. Those were expert tasters?—Yes. I might remark that both those samples bore the same estate marks. The first sample came so low that I am afraid my client thought I had made a mistake, and he sent down for another sample from a different cask, and I think a different shipping, but from the same estate, and it came out as you see very similar to the first one. It was not the same sample, but it had the same marks on it.

14093. Which are they?—They are marked with an asterisk.

14094. 16 and 122?—Yes. The second one was taken in consequence of the first one having turned out so low in ethers.

14095. Practically they are similar things?—Yes, turned out from the same factory.

14096. I see you call those in your *précis* low wines?—That is the expression that was used by the experts. What it means I have not the remotest idea.

14097. (*Dr. Horace T. Brown.*) They may have come from Jamaica?—They undoubtedly came from Jamaica. I think the dock would show that, but whether they were imported into Jamaica and then exported is another question.

14098. (*Dr. Adeney.*) But you say it had the name of the estate on the cask?—I did not see the cask, but there was an estate mark on the bottle as it came to me.

14099. Perhaps it would be an advantage if we have on the notes the maximum and minimum figures that you have, if you would kindly read those:—

	Maximum.	Minimum.
A. Acidity (calc. as Acetic)	141·3	53·6
Aldehydes (calc. as Ethyl Aldehyde)	57·6	23·3
Furfural	12·8	1·2
Ethers (calc. as Ethyl Acetate)	855·0	154·1
Higher alcohols (determined colorimetrically)	179·2	76·6
Co-efficient of secondary products	1,142·2	381·9

14100. (*Chairman.*) Is it your view that Demerara rum and Jamaica rum ought to be sold with distinctive marks so that the customer should know whether he is getting Demerara or Jamaica rum?—It is rather a difficult question for me to answer. I think the facts of the case are that they are two distinct articles. I think it is for the Commission to decide whether two distinct articles should be sold under separate designations.

14101. But do you wish to put forward the view that they ought so to be sold? Is that your opinion as a witness?—I have no opinion. I do not consider it my duty to put forward any opinion. In this case I was not forced to come to a conclusion. It is not like the whiskey case, where I was forced to come to a conclusion, and I came here to tell you why I had to come to that conclusion. In the case of rum I was not forced to come to any conclusion except that certain samples were not Jamaica rum.

14102. (*Dr. Adeney.*) Could you now give us the ethers that you found in the Demerara sample?—I only examined one sample, and in that I found 34·5 of ethers.

14103. It is very much below the minimum of the Jamaica?—Yes.

14104. You have given a quotation from the West Indian Committee's circular of May 16th, 1906, at page 226, which I think usefully might go on our minutes?—Shall I hand in the original document?

14105. Yes, that will be best. Would you give us the mean contents of esters according to that quotation?—I will read the quotation. "A return has been prepared by Professor J. B. Harrison, Government Analyst of British Guiana, giving the proportion of esters found to be present in the rum distilled in British Guiana during the crop year from July 1st, 1904, to June 30th, 1905. The mean contents of esters calculated as acetic ether in the samples examined was 63 parts per 100,000 of alcohol by volume as compared with 64·7 in the year 1903-4, 81·5 in 1902-3, and 104 in 1901-2. The mean contents in the rum crops of the four years was 78·3 parts of esters per 100,000 parts of alcohol."

14106. These analyses were made in 1905?—Yes, those were made by myself from rums bought at two public-houses in London. I could give you the names, but I do not think it would be quite fair at this date.

14107. What was the object of making those analyses?—These rums were bought at two public-houses as Jamaica rum at the instigation of Mr. Nolan, the Commissioner for Jamaica, and prosecutions subsequently ensued under the Merchandise Marks Act.

14108. What was the result of that prosecution?—In both cases the defendants pleaded guilty. There was no evidence on chemical composition given in either case, because they pleaded guilty and did not fight. I have got the composition of the two samples which I have marked A and B.

14109. Are those in the appendix to your *précis*?—No, they are at page 3 of my *précis*. Their composition was—Parts per 100,000 fluid parts of absolute alcohol:—

	A	B
Acidity - - -	48·4	59·4
Aldehydes - - -	22·4	12·6
Furfural - - -	1·1	0·9
Ethers - - - -	59·1	75·2
Higher Alcohols - -	187·2	270·2
Co-efficient of secondary products - - -	318·2	418·3
Non-volatile residue (per cent.) - - - -	0·44	0·96
Strength (actual) - -	21·8° U.P.	22·1° U.P.

14110. In your *précis* you say: "In Jamaica, rum is produced from a mixture of molasses and cane juice, whereas in Demerara, where rum is merely a bye-product, molasses only are used." What do you mean by that?—I do not know how I can put it in other words, but I understand that, in Jamaica, when they are going to produce rum, it is not merely molasses that is used, but actually untouched virgin cane juice, if I may so call it—cane juice from which no sugar has been removed, forms part of the vat. One of the witnesses this morning said in some cases it was entirely cane juice. I was not aware of that, but it is an essential constituent of the rum.

14111. Are you quite sure they do not adopt the same thing in Demerara?—I am informed not.

14112. Did we not have a witness this morning who said that they did?—Not in Demerara—that was in Jamaica. He was a Jamaica witness. The Demerara witness said that they were making food-cake for cattle from molasses mixed not with cane juice but cane fibre. I think I am right there.

14113. The statement that Demerara rum is a bye-product is a correct one according to him?—Yes.

14114. (*Dr. Horace T. Brown.*) I think there is some mistake about that?—It is a bye-product in Demerara, not in Jamaica. I suggest the name of a distinguished chemist from Demerara in my *précis* to whom this statement was submitted.

14115. (*Dr. Adeney.*) What is the chief produce where the rum can be called a bye-product?—Demerara sugar.

14116. You make another statement in your *précis*, that the flavour of Jamaica rum is largely due to its non-alcoholic secondary products, whereas the Demerara rum is partly due to added burnt sugar?—Yes.

14117. Do you make that statement on any solid evidence?—There is no doubt about that.

14118. You make that statement from what?—Taste. I have seen it in print from a Demerara source, but I am not certain about the source.

14119. Do you make that statement as an analyst after making analyses?—Perhaps I ought not to make that statement—I make it as a taster.

14120. We are, of course, regarding you as a chemist?—Yes, undoubtedly, that is so. But it really has a bitter taste with it.

14121. You say the character of a fermented liquid (whether distilled or not) depends not only on the materials from which it is prepared, and in the case of a distilled liquid on whether rectification is combined with distillation, but it also depends to a very large extent on the yeast with which the fermentation is produced?—That is so.

14122. What deduction do you make from that?—The deduction I make from that is that if you imported the molasses into England and fermented it you would not get rum, whether you distilled in a pot still or a patent still. There are large quantities of molasses fermented in England and distilled, but I believe the product is not the least like rum.

14123. Do you know of any other fermentations made in this country, for instance, of grape juice?—Yes. I have examined wine made in England from raisins and currants which are both grapes, and I presume fermented with brewers' yeast, and that had not the ether number of wine as we understand wine. I have also examined wine made in England with imported wine yeast, and that had the ether number of wine.

14124. Produced from raisins?—No, it was produced from sterilised grape juice.

14125. Have you any knowledge yourself of these essences that we have been told are used in the fabrication of imitation rum?—No actual knowledge of where they are used. I could give you the names of firms who produce them. I think you already have two names in front of you.

14126. Have you any reason to think that this imitation rum is being largely sold in this country?—I have no means of knowing. Of course, you might get the import numbers from the Customs, but I do not see how you are to get the quantities that are actually manufactured in this country. If you take the patent still grain spirit which I believe is now called patent still Scotch whiskey, and put some of these ethers to it, it becomes rum. We have heard this morning that it becomes gin under certain circumstances, but, of course, if you put in other essences it may become brandy.

14127. Of course, you would not regard as a legitimate practice in the trade making spirits in that way?—I think not—certainly not from the public point of view.

14128. (*Dr. Horace T. Brown.*) I suppose you have not attempted to make any analytical standard for rum in the same way as you did for whiskey?—For Jamaica rum I suggested 150 of ethers as a minimum.

14129. Would you condemn anything which did not come up to 150 ethers as not being Jamaica rum?—I should say that I was of opinion that it was not Jamaica rum.

14130. You feel that that opinion would not be sufficiently strong for you to prosecute on, I suppose?—I think it would, because the defendant would have every opportunity of showing his innocence. I should be the one to suffer if wrong.

Mr. F. L. Teed.

20 July 1908.

14131. You would make a minimum standard of 150 for your esters?—Yes.

14132. Another witness, in giving his evidence, based on a certain number of samples—a larger number I think than your 16—put the minimum at 200?—Yes.

14133. I have no doubt you have heard frequent reference made to the paper of Mr. Cousins?—I heard his paper mentioned this morning.

14134. He states as to some rums that are used for home consumption in Jamaica, that they vary from a minimum of 90 parts per 100,000 of alcohol to about 300, and he puts his minimum at 90?—Yes.

14135. We were told by Mr. Nolan that these rums which are used in the Island of Jamaica do not differ essentially from the rums which are sent to England, and consequently we must assume that you are making a mistake in putting 150 as your minimum standard, and that that is very much too high?—You see Mr. Cousins is not here to be cross-examined, so that we really do not know what he means by rum. He may mean any spirit produced in Jamaica.

14136. I am quoting here from the authentic document of Mr. Cousins, the Government analytical chemist, and he states that they have a minimum of 90 parts per 100,000 volumes of alcohol. Do you not think that 16 samples form a very small number on which to base a standard?—They form a small number it is true, but basing my information on that number I arrive at that figure.

14137. You see you have not only a very small number of samples, but you have a very large variation?—Yes, some of those 800 ones, no doubt, just so with German rums.

14138. Those run up to 1,200 or 1,500?—I think my highest was 855.

14139. I suppose we may take it you have only used the analyses for the purpose of getting *primâ facie* evidence, and that these prosecutions would have been taken up under the Merchandise Marks Act?—They were under the Merchandise Marks Act, and they were not under the Sale of Food and Drugs Acts.

14140. Then this was not on all fours with the whiskey cases?—No, not quite. The only difference is this, that in the whiskey cases and in any case under the Sale of Food and Drugs Acts the public analyst's certificate must form the basis of the prosecution. Under the Sale of Food and Drugs Acts you are not precluded from bringing in other evidence.

14141. Where were these cases?—One was heard in the City, and the other at the Clerkenwell Police Court.

14142. In both these cases the others were very much below your own standard?—Yes, very much.

14143. Lower than anything we have a record of here in Mr. Cousins' paper?—Yes. Mr. Cousins takes 90 as his minimum, and here the figure in one case was 59, and in the other it was 75.

(Adjourned to to-morrow at 12 o'clock.)

TWENTY-SEVENTH DAY.

Tuesday, July 21st, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
H. T. BROWN, Esq., LL.D., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq., (*Secretary*).

Mr. WILLIAM H. ROSS, re-called.

Mr. W. H. Ross.

21 July 1908.

14144. (*Chairman.*) We have had the advantage of having your evidence on the whiskey inquiry?—Yes.

14145. You are the managing director of the Distillers' Company, Edinburgh, and you are now appearing to give evidence in regard to gin?—Yes. We have a branch where we make gin.

14146. To what extent does your firm transact business with respect to gin?—It will be on a small scale relatively, probably about 300,000 or 400,000 gallons per annum.

14147. Manufactured by you?—Yes.

14148. What process do you employ in respect of the manufacture of gin?—In respect of the manufacture of gin, or the spirit from which gin is made, do you mean?

14149. Will you define what you call the spirits from which gin is made?—We make these spirits through the patent still from the ordinary mash of cereals and malt, the same as we employ for making whiskey.

14150. That would resemble the whiskey you manufacture?—Yes.

14151. And you make that by the patent still?—Yes.

14152. In former times was the same product produced by the pot still?—Yes.

14153. When did the change take place?—I suppose it would be at the time of the introduction of the patent still, probably a matter of 50 or 60 years ago.

14154. That was when the patent still came into use?—Yes.

14155. What is the next process in the manufacture of these spirits? How does gin come into existence?—We rectify that spirit through a rectifying still and send it to our gin distillery. There we make flavourings from the infusion of the berries, the juniper and other flavourings, we distil these over, and we mix that with the rectified spirit in order to get the finished product of gin. We refine the gin with certain materials for clearing it and there we arrive at the finished article. We have two distinct processes, first of all, the spirit which is rectified, then we distil the flavouring materials separately with a small quantity of spirit, and after that has been done we add the flavourings to the rectified spirit.

14156. What is the flavouring composed of?—Juniper berries, coriander seed and a few other flavourings. It is really a secret amongst the different manufacturers. They employ their own particular flavourings, but these are the two principal ones that we employ.

14157. First as regards the process. How was it that the patent still came to supersede the pot still as the process?—The spirit from the patent still, of course, is produced at a cheaper rate. The cost has very largely to do with it, and also we can produce through the patent still more pure spirit than through the pot still, and therefore it requires less rectifying after we have the spirit.

14158. Is the pot still still used by other merchants and manufacturers?—I do not think so in this country.

14159. I gather from that it would be impossible to put any restrictions upon the use of the patent still?—No, I think it would be quite impossible.

14160. The pot still manufacturers can take care of themselves?—Yes.

14161. Therefore I will take it generally you would not be disposed to place any restriction on the processes that are now used in producing gin?—None whatever.

14162. Are different classes of gin produced?—There are different qualities of gin, some are better than others and some command better prices than others. I suppose that is due largely to the flavourings used and the class of spirit employed, because all spirit from which gin is produced is not equally suitable for the purpose. We find, for example, that one quality will give a different flavour to another, showing that there is a certain amount of flavour left in the spirit even after rectification.

14163. Is there, as far as you know, any adulteration in the manufacture of this gin?—I have not heard so, not to my knowledge. It may be so, but I have not come across it.

14164. Not in your trade as far as you know?—No.

14165. It is not a very dear commodity? Of course adulteration is attempted for making gain out of it. What about is the price per gallon irrespective of duty?—Of the gin?

14166. Yes?—As to that really I cannot say very well, because it is sold in different strengths.

14167. It is not very high class?—No.

14168. Of course there is considerable manufacture of Irish gin and English gin, but do you know enough to say whether it is a pot still or patent still process that is used—for the Irish gin and the English gin?—It is a kind of pot still in which the flavourings are distilled over. It is a modification of the pot still, but the spirit itself is entirely produced, I think, from the patent still.

14169. As well as in Scotland?—Yes.

14170. What is the effect of time upon gin? Does it improve the spirit or not?—No, I do not think so. I think it rather deteriorates if put into cask. It takes on the colour of the wood and otherwise it does not improve, I think, with age.

14171. Would it or not be beneficial to the consumer to say he should not drink gin under a certain age?—All my information goes to the contrary, that it is better when it is new than when it is old.

14172. Therefore you would not have any restriction upon the time at which it is to be used?—No.

14173. (*Dr. Horace T. Brown.*) Do you regard it as important that the origin of the spirit used in the manufacture of gin should be cereals?—I think so, for this reason, as I have explained, that every spirit has a certain amount of character left even after rectification, and I think a gin distiller could recognise a spirit, say, from molasses, as apart from a spirit produced from corn or cereals.

14174. You do not require a pure alcohol?—No, not absolutely.

14175. That would not suit your requirements?—No.

14176. Should you object to an alcohol which had been derived from fermentation of molasses?—I think so.

14177. On account of flavour, or what?—I think it is not such a pure spirit so far as the flavour is concerned. There is an objectionable flavour arising from the molasses.

14178. It is purely a question of flavour?—Yes.

14179. You have no other objection?—No, I am not aware of any.

14180. Would you like to see legal restrictions put upon the materials used in the manufacture of the alcohol?—It would suit our purpose very well. I do not know whether it is really essential.

14181. You mean in the course of your manufacture of cereal spirit?—Yes.

14182. (*Dr. G. S. Buchanan.*) The spirit that you use for the manufacture of gin is the same as your whiskey, is it?—It is. Of course, I explained to you, that is to say, in my *précis*, that we use a better quality of spirit than is really required to be used for the making of gin. It would not pay us to separate the two processes and make one quality for gin and one for whiskey. Therefore we use the same mash for the two kinds of spirit.

14183. If you wanted to make the cheaper kind for gin, how could you do it?—Reduce the quantity of malt.

14184. The Caledonian Distillery, Edinburgh, is where your spirit is made?—Yes.

14185. Is that a yeast-making distillery?—No. Of course, that is supplying our own gin works. We supply spirit from other works for other rectifiers where yeast is made.

14186. Do you supply any of your grain whiskey to gin distillers?—Yes.

14187. Have you ever had any of it objected to on the ground of it being unsatisfactory?—No, I do not think so. Our own gin distillery in London has occasionally objected if they did not get the Caledonian. I took that to mean that there was a difference in the flavour from what they had been accustomed to.

14188. I have been informed that a certain kind of patent still whiskey, especially that which is derived from processes in which yeast is obtained, is not suitable for gin. Have you had any experience of that?—Where they have been in the habit of using another class of spirit I believe that is so, but it is the fact that at the present day we are supplying gin distillers with spirit derived from a mash from which yeast has been obtained.

14189. (*Dr. Adeney.*) Can you supply that cheaper?—No; we supply cheaper than Caledonian, of course, but it is a different distillery entirely.

14190. (*Dr. G. S. Buchanan.*) Does any of the same spirit go to firms who blend or mix it with rum for export?—Yes, I should think so.

14191. As to the former use of the pot still, I suppose that before the patent still was in existence the pot still was practically the only method of getting a cheap alcohol at all?—Yes.

14192. You say there used to be shipments of pot still spirits from Scotland to London for that purpose. Were those Highland pot still spirits, do you know?—No, Lowland. The distilleries I refer to were situated in Fife.

14193. Where the patent still distilleries have now grown up?—Yes.

14194. I understand your first process, after you have got the ordinary grain spirit, is to rectify?—Yes.

14195. Could you give us any indication as to the amount of bye-products that remain in the rectified spirit that is suitable for gin?—No, I do not think we ever tested that; it is a mere matter of smell.

14196. There is no sort of standard of rectification?—No.

14197. (*Dr. Adeney.*) Have you a flavour standard?—We cannot give the name to the flavour at all, but there is something different in one spirit from another which, I think, must be flavour, because, where one rectified spirit would give a good result, another would be objected to.

14198. Is that rectified from a similar class of spirit?—From a different spirit.

Mr. W. H. Ross.

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14199. (*Dr. G. S. Buchanan.*) Then, in your case, would one be correct in saying that, having got the rectified spirit, you add what is practically essence?—Well, it is not essence as understood in the trade, that is to say, we distil our own flavourings. We know the origin of this, we have the different berries and herbs, and we distil those ourselves.

14200. They are entirely under your own control?—Yes.

14201. Could you give me any indication as to what the commercial essences are in that respect?—No, I have no knowledge.

14202. You are aware, of course, that they are offered in catalogues of quite well-known firms. I have one here where it says: "Gin flavour dry per lb., 9s. 6d.; London gin flavour, 9s.; Schiedam gin flavour, 9s.;" and so forth. The gin essence is a commercial article, is it not?—I believe so, although we have never used them ourselves.

14203. If gin were being defined, would you consider it desirable in any way to define it so that it excluded the addition of essences?—I would hardly say that, because if the essences are produced from proper materials I do not see why they should be excluded.

14204. If you were asked to define "gin" in any way, could you give us any indication of that?—Of course I could only define it in the way that we ourselves understand it, and we manufacture it; that it is produced from a highly rectified spirit derived from cereals and malt, and flavoured with juniper berries and other herbs, distilled over by themselves, and mixed afterwards with the rectified spirit.

14205. That would be your own process?—Yes.

14206. You would not wish to suggest a definition of "gin" that is comprehensive and would cover all, what we may call legitimate, varieties of gin?—I would not like to give that because I do not know sufficient of the question to do so.

14207. You have had no experience with molasses spirit in connection with gin making?—No.

14208. Then there was one point I wish to ask you about in your *précis*. You point out that assuming that a two years' compulsory age limit for whiskey, which I think you advocated on a former occasion—assuming that that was imposed merely on the ground that it was a great improvement of the spirit and not on the health ground, you say that that would be a hardship to the cheaper form of whiskey, because it would give gin an unfair preference?—Yes.

14209. Just to follow that up. Could you tell us what it costs to turn a new grain spirit into gin—I mean the process of rectifying?—I suppose it would be somewhere about 3d. to 4d. per gallon.

14210. What would be the cost of keeping new grain spirit for two years?—About 3d. per annum.

14211. Then if the two go to the public at equal prices would whiskey be seriously handicapped?—No, but gin can be sold at lower strength than whiskey, and to that extent it has that advantage now, so that if added to that there was the addition of 6d. to the price of the grain whiskey or the cheap whiskey it places the latter at a further disadvantage.

14212. Do you think that that would make much difference to the public? Would the public have to pay more for its whiskey?—I should imagine so. That is the very cheapest class of trade where they are in the habit of getting a half glass for 1½d. I think they would be bound there to increase the price if it were to be kept for two years.

14213. You are thinking now of the people who drink the new grain whiskey?—Yes.

14214. Do you think any one of them is going to give that up and take to gin in consequence?—Certainly, it is only a matter of price with some people. I think the particular kind of article they drink is a matter of little moment to them so long as they get something for the price.

14215. (*Dr. Adeney.*) Is the method of imparting flavour to gin by distilling with juniper and other herbs a general process for the production of gin?—I think so. Certainly in London, I think, it is the general practice. I do not say it is invariable.

14216. Does it produce a very distinctive flavoured gin as compared with the method you use yourself?—Each one, in fact. There are scarcely two gins alike in flavour. I think that arises pretty much from the different flavourings used.

14217. I take it the distillation to impart flavour is always done in a pot still?—A kind of pot still, it is not the ordinary whiskey pot still, but that type of still. It has a long head for rectifying to some extent the product.

14218. Has the same care to be given in that distillation as in the case of distilling for whiskey in a pot still?—Yes, I believe so.

14219. Have you any knowledge of these essences that are sold in the market?—None whatever.

14220. Of course, they are open to adulteration?—Yes, I suppose so, but as to that I could not speak with any knowledge.

14221. I see towards the end of your *précis*—I do not know whether you have had an opportunity of stating it—you suggest a way out of the difficulty in reference to a compulsory age limit for whiskey?—Yes.

14222. Would you describe your suggestion?—I think it would be a distinct hardship to keep gin in bond for any length of time, and on the other hand if gin were allowed to escape there would be a distinct hardship to the cheaper class of whiskey. The same object might be obtained, always assuming that the public health is not affected, by getting the Excise to give a certificate of age for any age of whiskey so that the trader might be allowed the benefit of that certificate where he supplies a whiskey older than two years, or whatever limit might be fixed. Many whiskies just now average an age of ten years, and it would be of little value to a trader to know that the only certificate he has is that it is over two years old. As a matter of fact in the certificate which is granted just now in the case of whiskey shipped to Australia, all they ask is that the whiskey has been distilled in Great Britain, and matured in wood for not less than two years. Really that is of very little material value to the trader if the whiskey is actually eight or ten years old. I do not know whether it is feasible, but if it were possible for the Excise to grant a certificate of age it would be not only a benefit to the trader but a great advantage to the consumer to know the age of the whiskey that he is drinking. It would not be compulsory, but anyone who had any wish to get a certificate of age for his whiskey would be able to have it.

14223. And it would be an advantage to him to get that, even if he had to pay a nominal fee for it?—Quite so.

14224. (*Dr. G. S. Buchanan.*) Assuming that you had some kind of definition as to what Scotch whiskey was, for example, would you extend your suggestion to that, so that the Excise might guarantee that it was Scotch whiskey in terms of a particular definition?—That would depend altogether on what the definition of Scotch whiskey is.

14225. The principle is the same?—Quite so, but age, I think, is much more simple.

14226. (*Dr. Adeney.*) The origin could be given as well as the age?—Yes, but it would be more difficult.

14227. (*Chairman.*) Who is to have the certificate of age?—It would be only possible where the whiskey is bottled in bond. It could not apply to whiskey removed duty paid.

14228. Suppose it is bottled in bond. The bottles are sold by merchants to the publican, the middleman, the licensed victualler, who gets the bottle with a brand on it of "4 years old." How does the customer know that?—It would only apply to the bottle, and therefore only where the man buys the full bottle, but when it comes to a question of selling across the counter I am afraid there is no possibility of having that check imposed.

14229. As regards the merchant, the middleman, the publican, it is being sold in cases of so many bottles, and he gets his invoice for that, and from the invoice he learns that he is getting four-years'-old whiskey?—Yes.

14230. Then what is the use of having it on the bottle?—He could supply single bottles to his customer with this certificate upon it.

14231. The person who bought the bottle would then know that the publican told him that it was four years old?—Yes.

The witness withdrew.

Mr. Herman Jansen, called.

14232. (*Dr. G. S. Buchanan.*) You are chairman of the Distillers' Union, Schiedam?—Yes.

14233. Your firm are Geneva distillers?—Yes.

14234. You are a member of the Committee appointed several years ago to enquire into the adulteration of Geneva as practised both inside and outside Holland?—Yes.

14235. Could you tell the Commission what the adulteration that you refer to consists of?—Yes. Since about 20 years ago they started mixing ordinary spirits with Geneva—with Hollands.

14236. Ordinary spirit being what?—Silent spirit.

14237. With Geneva?—Yes, with Geneva so as to make it cheaper.

14238. The Geneva you regard as not produced by plain spirit?—No, certainly not. It is made by pot stills.

14239. You are restricting the use of the word "Geneva" there to what is made in Schiedam?—No, not at Schiedam, but made in pot stills by three distillations at least from grain.

14240. (*Dr. Adeney.*) Are any of those three distillations done for the purpose of rectification?—Yes, and to obtain the special flavour that is wanted. For instance, two distillations would be too little and would give the wrong taste.

14241. Through each process of distillation is the flavouring being imparted?—No, it is not flavoured at all in the three distillations. If the gin has to be sent to countries where flavouring is wanted then the flavouring is added to the further distillation. For instance, if wanted for the English market they always would make a fourth distillation because they want a little flavouring in the gin.

14242. (*Dr. G. S. Buchanan.*) I will take you through the main headings of your *précis*. You say that the adulteration of Geneva is the cause of the decline of Schiedam. In the sense you have spoken of it, do you say in your opinion that that is the cause of the decline in Schiedam?—It certainly was.

14243. Did that reduce the number of distilleries that were working?—Yes, to more than half the quantity.

14244. You say that out of about 350 distilleries in existence about 15 years ago there are now only about 150 remaining. Is that in Holland?—No, that is only in Schiedam, but they are all very small ones.

14245. By distilleries, do you mean actual firms, or do you mean stills?—No, I mean separate distilleries.

14246. You say that out of the 350 distilleries in existence about 15 years ago there are now only about 150 remaining?—That is so.

14247. And many of those are in a bad financial position?—Yes, business is very bad with us.

14248. Can you compare the amount of grain and silent spirits used now with what used to be the case?—Yes. The total production of Holland is about 700,000 hectolitres at 50 per cent., and formerly it was all grain spirit, either silent spirit or Hollands. Now the quantity of grain spirit and Hollands made altogether is about half that quantity. All the remainder is spirit of molasses.

14249. Spirit of molasses in Holland?—Yes.

14250. Is the adulteration that you complain of the mixture of the molasses spirit with the Schiedam spirit?—Yes.

14251. It is not that the molasses spirit is flavoured by itself without any mixture of Schiedam?—Generally they put some Hollands to it to give it a better flavour. Spirit of molasses has no flavour of its own; it should be silent.

14252. With regard to the difference in distillation between your genuine pot still Geneva and what you regard as the adulterated mixture, can you tell us what the difference is?—The pot still Geneva is made of pure grain; it must be pure grain or else it will not do, and it is distilled at least three times in pot stills. The gin gets a certain flavour which is called the flavour of the Hollands, whereas in the other spirit that is made in the continuous stills, in patent stills as you call them, all the flavour is taken off and a silent spirit is made.

14253. The addition of the specific flavour takes place after the three distillations, does it not?—Yes, but after the three distillations the Hollands has already a special flavour of its own.

14254. And that special flavour belongs to the spirit before any flavourings are added to it?—Yes.

14255. Can you tell us what the flavourings consist of?—Yes. It depends upon the country that it has to go to. For instance, if it has to go to the United States a deal of berries are added to it, but if it has to go to England only a very small quantity of berries and some other flavouring ingredients are added—very little of them.

14256. Have you any evidence that what you regard as the adulterated article, the molasses spirit that is flavoured with a little Schiedam, is dangerous to health or objectionable?—I will not say it is dangerous, but still it is not as good as the real Hollands gin. The real Hollands gin has got a reputation for use in some illnesses, and it seems to be pretty good for the health, but the ordinary spirit is not so good. We think it would be a bad thing if people thought they were buying real Hollands, and they got ordinary spirits.

14257. Has that been the subject of any medical inquiry in Holland or by any public authority?—No, it has not, but the distillers would not object to it.

14258. You say that the genuine pot still Geneva is a distinct article from the mixture of pot still Geneva and other forms of spirit?—It certainly is.

14259. You have endeavoured to meet that by getting some form of control?—Yes.

14260. Will you describe to the Commission what that control is?—Yes. All the distilleries in Schiedam and also in the neighbouring towns where they make real Hollands gin are exactly the same. They even have the same sizes of stills, the same sizes of vats, and everything, and therefore they all make about the same products, so that when there was a complaint that our business was going backward they asked the Municipality of Schiedam to institute a control for the genuineness of Hollands Geneva; and thus the present regulations were made to the effect that those distillers who bind themselves not to use anything but real Hollands will have the use of a special label to distinguish the real gin from the falsified, these guarantee labels to be used on casks, bottles and cases.

14261. Are you a member of the Municipality?—No, I am not.

14262. Are the distillers very largely represented on that?—No, not largely.

14263. It is entirely a municipal matter and not controlled in any way by the Dutch Government?—It is a municipal matter, and the Dutch Government approves very much, and in fact the butter control was made after that for the Geneva.

14264. Are you wanting to develop it on the lines of the Dutch butter control, that is to say, after it has worked successfully locally that the Government should take it over?—Yes, we should like the Government to take it over, but the Government says it is too local for the present, at least.

14265. How is this guarantee passed on in any way in the case of the British Geneva, that is to say, Geneva that comes to this country? How do you pass that guarantee on to the public?—All the controlled gin that is sent to England bears a town guarantee label on the cases, bottles and casks. Shall I show you one?

14266. If you please?—That is a label on a small bottle, just to show you the kind of thing. (*The same was handed to the Commission.*)

14267. It is a label that goes over the neck and the cork?—Yes.

14268. Is the Geneva that comes into this country practically all in bottles or in cases?—It is mostly in bottles.

14269. Each bottle is covered by a label in this way?—Yes.

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14270. What is it precisely that the Municipality does guarantee in connection with this?—It guarantees that it is really the pure Hollands gin.

14271. Can you put that into some more specific term? It guarantees that it is made in Schiedam, and that it is made by your process?—It does not guarantee that it is made in Schiedam because if a distillery works on the same conditions out of Schiedam in Holland it would come under control also.

14272. Then it guarantees that it is made by your particular process?—Yes.

14273. That is to say, that it is made in a pot still?—Yes.

14274. With this triple distillation?—Yes. I have here the translated rules.

14275. We want to know what sort of significance this has to the public here. If those rules are not long will you read them?—They are not long and I will read them. This is the order as to the genuineness and the guarantee thereof of Hollands (Schiedam) Geneva and Schiedam Maltwine. "According to this order Hollands Geneva is understood to be a distillation in which no other spirits have been used than Schiedam Maltwine. Schiedam Maltwine, according to this order is understood to be maltwine, the strength of which is not more than 48 per cent. (15½ U.P.) and not less than 43 per cent. (24½ U.P.) being manufactured either in Schiedam or elsewhere in Holland in a grain distillery whose owner has arranged with the municipality of Schiedam as to the guarantee of genuineness, for this same distillery, and in which distillery the old Schiedam system of distillation shall be applied, that is to say, wherein with direct fire or enclosed steam the distilling takes place and where from the fermented mash a first distillation called Roughwines (ruwnat) is made, then a second distillation from those Roughwines to Lowwines (enkelnat) and subsequently a third distillation from these Lowwines to Maltwine (moutwijn)."

14276. Is there any form of inspection, or have you any special inspecting officer?—Yes. First the Customs themselves control the matter. The controller of the town has the right to inspect the registers at the Customs, and everything that goes into the distillery has to be registered in those registers of the Customs, so that it is very easy to see if anything else has entered, but, coming from a distillery that is under control so that no silent spirit can be introduced, and nothing but real maltwine can be made in such a distillery, and nothing else but real Schiedam maltwine is allowed to enter; and this can easily be ascertained in the manner this control is carried out.

14277. The Excise authorities are Government authorities, are they not?—Yes.

14278. They have nothing to do with the Municipality?—No, they are Government authorities.

14279. Has the Municipality any sort of relation with the Government officers?—Yes, they have inspectors who first come to see that in a distillery that wants to come under control everything is done so that only Hollands can be made there, and afterwards they come to inspect to see that the Geneva which is sent from such distillery or packing-house has the town label that it should have, and also they see to the register; the control is very severe.

14280. Can you tell me whether these Municipal inspectors have any sort of relation at all with the Excise officers? Have they access to their books?—Yes, because they have the right to inspect the registers of the Customs House.

14281. Can you tell me whether any definite ingredients are prohibited by the system of control as being injurious to health or that they constitute an adulteration?—In genuine Geneva there is nothing that is injurious to health. Distillers under control are only allowed to use grain.

14282. (*Dr. Cushny.*) What evidence have you that genuine Geneva has a beneficial influence on the human system? In your *précis* you say that genuine Geneva has a beneficial influence on the human system?—It is generally taken that it is so. In Australia, Canada, and also in this country, they take Geneva for certain maladies and we find also in Holland that people who make use of Hollands do not have the bad effects from it that they have when they take other spirits.

14283. You understand that it is an extremely difficult thing to prove on one side or the other?—Yes, it is.

14284. You have no direct medical evidence?—No, it is the *vox populi*.

14285. Does Schiedam that is made in Holland contain juniper?—Yes.

14286. Then you add other flavourings when it comes to this country?—Yes, but only a little.

14287. But it all contains juniper?—Yes, that is the principal ingredient.

14288. (*Dr. Horace T. Brown.*) Is it a fact that some Geneva is imported into this country in cask?—Yes.

14289. Is any control label placed on that cask?—Yes, the casks are sent over to this country, and the pure genuine Geneva have also a town label.

14290. But how is it possible to follow up that control beyond the cask?—That cannot be done. The buyers are not allowed to use the labels on the bottles. They are only allowed to use the labels in the distillery which is under control and nowhere outside Holland.

14291. But when the cask comes over to this country, are there any means of following that control beyond the actual label on the cask?—No.

14292. I want to ask you a few questions with regard to the processes of manufacture. I am not quite clear, first of all, as to the composition of the mash. You say it has to be pure grain?—Yes.

14293. Is it always saccharified by malt?—We use about one-third of malt and one-third of maize and one-third of rye.

14294. Do you know anything of the Amylo process?—Yes, I do.

14295. Has that come into use in Holland?—No, not at all. That would not do at all.

14296. Are Hollands made to your knowledge by the Amylo process?—No, not at all.

14297. What is the alcoholic product of the Amylo process?—You can make pure spirit with it—silent spirit.

14298. It is unsuitable for Hollands?—Yes, unsuitable for Hollands.

14299. Your process of fermentation differs somewhat from that of this country. I think you ferment the whole mash?—Yes.

14300. Does that give any distinguishing flavour to the spirit?—It certainly does.

14301. You regard that as an essential part of the process?—Yes, or else you make a spirit that is too clear.

14302. That is one of the conditions?—Yes.

14303. That comes under the control?—Yes.

14304. You mention in your *précis* that a certain Committee was appointed several years ago to inquire into the adulteration of Geneva?—Yes.

14305. By whom was that Committee appointed?—By the trade in general.

14306. It was not a Government inquiry?—No.

14307. Did that Committee issue any report?—No, it did not. It was simply a commission out of the distillers.

14308. Was there no report issued?—There was no written report, but there was a verbal report.

14309. Can you give us some idea of the nature of that report?—Yes, we found out that on account of the extension of the manufacture of spirit out of molasses and the cheapness of that spirit that that spirit was used to reduce the price of the Hollands, and that therefore there was less Hollands used than there used to be, and that was the reason of the decline in the distilling trade. That is the long and short of it.

14310. The opinion was that the quality of the produce had been deteriorated?—No, that is to say, not our product, but what was sold.

14311. It had been deteriorated by the use of the molasses spirit?—Yes, the mixing of it with molasses. The packers and exporters, instead of using nothing but Hollands gin, use partly Hollands gin and partly spirit of molasses.

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14312. Is your objection to the use of molasses spirit one entirely of cheapness, or do you object to it on account of flavour?—On account of flavour, and besides, people buying Hollands should get Hollands and not Hollands mixed for the greater part with molasses.

14313. In fact, you think the use of molasses spirit prejudices your Hollands?—It certainly does.

14314. (*Dr. G. S. Buchanan.*) I do not think we got from you whether this system of labelling and control has done you any good?—No, I am sorry to say, not so very much, because all the packers and exporters buy the Hollands from the distillers. The distillers seldom send out their own distillate, but they sell it to the packer. The packers very much objected to that control because they would make less profit by not being able to mix it with cheaper spirit, and therefore they had a meeting, and decided that no one of them should come under the control. Therefore, it is only a few distillers that are under the control.

14315. Did the Dutch butter control to begin with go through the same stage?—Yes, something like that.

14316. (*Dr. Adeney.*) Do any Geneva distillers export Hollands into this country in bottle only?—Not that I know of.

14317. But do you also export in bulk?—Yes, in bulk if it is demanded.

14318. Do any of the distillers of Hollands export only in bottle to this country?—I do not think there is one that exports only in bottles.

14319. I have in my mind a firm that has successfully taken action in the protection of their label from imitation?—Yes, that happens sometimes, but I do not know if there is any firm that exports nothing but in bottles. There may be, but that would be lately perhaps.

14320. You cannot tell me whether a label effects a complete protection to a firm?—No, I do not think so

The witness withdrew.

Mr. A. Henderson.

Mr. Alexander Henderson, called.

14321. (*Dr. Cushny.*) You are a member of the firm of Kuhner, Henderson and Co., of 115, Cannon Street, London?—Yes.

14322. What is the business of your firm?—We are the sole agents for the Angostura bitters.

14323. Those Angostura bitters are made where?—In Trinidad, in the West Indies.

14324. Who manufactures them?—They are made by the firm of Dr. J. G. B. Siegert and Sons, of Trinidad.

14325. Is much of this product used in the United Kingdom?—Yes, it is very largely used in the United Kingdom, and in every country.

14326. Is that a distilled spirit?—This is a liqueur. It is what they call a perfumed or sweetened spirit.

14327. A compound spirit?—Yes.

14328. What are the other bitters that are chiefly used?—The only other bitters that is used to any extent to my knowledge is Orange bitters.

14329. What are the others that are comparable to this?—There are Chartreuse and Benedictine, which are two of the principal liqueurs. There are others, such as Maraschino, cherry brandy, and so on.

14330. Of course, you wish to keep secret the method by which they are manufactured?—Yes.

14331. Are those distilled after you add the other constituents and alcohol?—The alcohol is flavoured with the other constituents after distillation in most instances.

14332. You do not re-distil after that?—No, I believe in some instances some liqueurs are made by distillation, and the flavouring is added in the process of distillation.

14333. What strength of alcohol is contained in that distillate? What is the strength of the spirit?—About 15 under proof.

14334. How long has this manufacture been going on?—The manufacture of the Angostura bitters has been going on since 1824.

14335. I want to get from you what you wish to bring before us. I understand you object to it being compulsory to disclose the secrets of manufacture and the proportions of the constituents?—Yes, so far as bitters and liqueurs are concerned, all the leading sorts are secret manufactures and are proprietary articles, which it would be a great injustice to the proprietors to have to disclose, and no possible benefit would be conferred on the consumer.

14336. Are those Angostura bitters kept at all after being made?—They are kept after being made.

14337. If they were kept for a number of years, would they improve at all by keeping?—I do not think they would improve. As a matter of fact, they are kept for some years, but I do not think it makes any difference to the quality because the spirit is old when the bitters are manufactured.

14338. The spirit is old?—Yes, it is already old.

14339. What spirits do you use?—That is one of the secrets of the manufacture.

14340. Is it made in patent stills or pot stills?—Speaking of my particular article it is made in a pot still, but I do not know that that applies to all liqueurs.

14341. Do you wish any restriction at all to be put upon the method of manufacture of these bitters?—No, none whatever.

14342. (*Dr. G. S. Buchanan.*) Are bitters as a whole always alcoholic fluids?—They always should be. There are cheap imitations of other bitters made which are not alcoholic, but they are quite useless as bitters.

14343. Could you put your own product or Angostura bitters under any sort of head? I do not understand in what sense these words cordials and liqueurs are used; but is there any sort of heading that you could put them under that would distinguish them from such things that you have been speaking of—the non-alcoholic bitters? Is there any trade heading that you could put them under?—The only trade heading is bitters, liqueurs and cordials; they are always bracketed together.

14344. They are rather interchangeable terms?—Yes.

14345. Do they signify in the trade something with a definite alcoholic strength?—No.

14346. They may have none?—They must have some, but each particular article will have a different strength.

14347. I take it the alcohol is a very small part of the bitters. Nobody gets bitters for the alcohol. The alcohol is merely a vehicle?—Yes, the alcohol is merely a vehicle: it is a solvent for the flavouring essences.

14348. Taking that class generally—bitters, liqueurs and cordials—putting it in that way, would you consider that the alcohol may be obtained in any way you choose?—Yes.

14349. It need not, for instance, be rectified spirit or anything like that?—No.

14350. You would not insist upon it being a highly rectified spirit?—If an inferior spirit is used the quality of the product would suffer, but these articles of which I speak are proprietary articles which are kept up to a certain standard and if they altered the quality of the spirit in any way the quality of the product would suffer.

14351. Have you any knowledge of the use of new grain spirit in connection with the preparation of any cordials or liqueurs?—No, I have not.

14352. Is it used at all, do you know?—I believe it is used.

14353. I want to put to you one point with respect to your objection to any knowledge on the part

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of anybody with regard to your materials that you use. If there was any question of necessity of guarding against some risk to health would you take any objection to a properly accredited Government Department knowing what you used?—No, I should have no objection to a Government Department analysing and testing the properties of the bitters and in fact that is already done when they are imported.

14354. I mean not merely testing, because anybody can analyse and test, but I mean would you object to affording them sufficient information to enable them to know whether any particular deleterious ingredients were used?—By analysis it is impossible I believe to ascertain that.

14355. That is not my question. Do you extend your objection to an inquiry on public health grounds by a proper authority?—No, I have no objection to that.

The witness withdrew.

Mr. J. M Nicol.

Mr. James Monro Nicol, called

14356. (*Dr. Horace T. Brown.*) You are, I believe, director and secretary of Thom and Cameron, Limited, 93, Cheapside Street, Glasgow?—Yes.

14357. You are exporters of Scotch whiskey, West Indian rum, British rum and compounded spirits, and you are proprietors of Customs bonded warehouses?—Yes.

14358. You have compounding premises in Piccadilly Street, Glasgow?—Yes.

14359. I believe you also carry on the business of general merchants with Demerara and Barbadoes?—That is so, and we are established there as general merchants.

14360. You wish to make some remarks to the Commission about a certain practice of mixing rum and plain spirit for exportation?—Yes.

14361. It has been suggested by one witness that this practice should be prohibited?—That is so.

14362. I understand that you take a different view. Will you kindly explain to the Commission exactly what that view is?—As stated in my *précis*, my present company and its predecessors have carried on that business for almost 40 years in accordance with the regulations of the Excise and Customs.

14363. That is the business of mixing Demerara rum with plain spirit in bond?—Yes. We therefore feel that it would be very unfair to us now to have that permission taken away not only on account of our own loss but we feel that it would be to the loss of the trade of the country, and there is no doubt about it that other countries would step in and do the trade if we did not do it.

14364. Under what designation is this mixed rum exported by you; how is it described?—It is ordered first of all from us as a rum and we invoice it as a rum. We use the term "rum" in our correspondence ourselves, but in the Customs, of course, the name "rum" is not recognised. The casks do not bear on them the name "rum." They have to be marked "mixed." That is certain.

14365. (*Chairman.*) Not "rum" but "mixed" by itself?—Yes, the word "mixed," which I suppose is a sufficient indication, or at least it meets the requirements of the Excise and Customs, that it is a mixed spirit.

14366. (*Dr. Horace T. Brown.*) That is, mixed for foreign use?—Yes.

14367. But is there any further mark on the cask that is exported?—That depends entirely on the market that the article goes to.

14368. Take Australia, for instance?—For Australia it is now necessary to add the country of origin on to the casks and therefore they are marked: "The produce of Great Britain and the West Indies." There is no objection to putting on the word "British rum," and as a matter of fact in exporting to Australia these two words do appear over and above the statement as to the country of origin.

14369. You have on that cask when sent to Australia, have you not, "British rum," the produce of Great Britain and the West Indies, in addition to the word "mixed"?—Yes, that is so.

14370. How do you invoice those mixtures?—It is invoiced as "rum."

14371. To Australia?—Yes.

14372. And the term "British rum" does not appear on the invoice?—No, it does not appear. Of course, the rum may have a brand as many rums have. As I understand, many rums in Australia are known by the brands, such as our own. Our own brand is known as the "Red Star Brand."

14373. Where does the bulk of that spirit go to?—It goes to Australia, New Zealand and the Australasian islands as well as to different parts of Eastern Europe.

14374. Does New Zealand accept it without any special designation?—They do; no certificate of age is required in New Zealand.

14375. And no special description?—No, no special description.

14376. It simply goes there marked "mixed"?—That is so.

14377. And invoiced as "rum?"—Yes, invoiced as "rum." In our case the invoice has on it "Red Star Rum."

14378. Do you know if any spirit of that kind is sold in this country as rum, that is, mixed Demerara or Jamaica rum with plain spirit? Of course, I am aware that that could not be done in bond for home trade, but do you know whether spirit of that nature is sold as rum in this country?—I am not aware of it. We are not in the Home Trade, and of course I do not know the ins and outs of it.

14379. Would you regard that as a legitimate trade in this country?—I would.

14380. To sell that as "rum?"—Yes. I consider that there is no monopoly in the word "rum."

14381. You do not think that the word "rum" necessarily connotes an origin from the sugar-cane?—Not necessarily.

14382. Is there any limit that you would make to a mixture of this kind? I mean in order to call it rum, what is the smallest amount of genuine rum that would be admissible?—I would not like to state a limit or to say what might be called rum and what might not, but I can say this, that for ourselves the proportion of Demerara rum to that of plain spirit is very much in excess of the ideas of those who are against the mixing of these two products.

14383. (*Dr. G. S. Buchanan.*) Could you put it in a concrete way? What is the smallest amount of rum you can get in the cheapest article you send out? You must have a cheap trade as well as anybody else. What is the smallest amount of rum you would put in?—That we use, or that might be used?

14384. That you can put in?—I should say if you used one gallon of Demerara rum with your British spirit it would have to go out as mixed spirit.

14385. One gallon of Demerara rum to how many gallons of plain spirit?—One gallon of Demerara rum to 100 of plain spirit.

14386. (*Dr. Horace T. Brown.*) You say you would be entitled to call that "rum?"—It would go out as "mixed spirits."

14387. But you would invoice that as "rum?"—I do not think we would.

14388. Can you give us a definition of "rum?" What do you consider rum to be?—I do not know that I can improve on the definition that I have alreary seen given. Rum is a kind of spirituous liquor distilled from molasses or it might be from the skimmings of the sugar-cane in the boiling house, or from any saccharine matter.

14389. That would be your definition of rum?—Yes.

13490. How does that fit in with your practice? Suppose you have a large amount of plain spirit mixed with a certain amount of molasses spirit, is it a legitimate thing to call the whole of that rum? You have already said that it would be the product of molasses?—You are thrown back on a trade term.

14391. I asked you for your definition of rum which you gave me, and it seems to me not to include this particular mixture which you say you are exporting as rum?—It may.

14392. I am taking your own definition?—Yes, spirit made from molasses.

14393. But you say that a great deal of this rum that you export is a mixture of molasses rum with plain spirit. That plain spirit, I suppose, is the product of cereals made in this country?—Not necessarily.

14394. Would you confine yourself to plain spirit made from molasses in this country?—No. I would use the plain spirit made from cereals.

14395. How does that come under your definition of rum?—I have simply given you the definition as laid down in different dictionaries, but I hold that the rum has become a trade term as applicable to a liqueur as distinctive from whiskey or sherry.

14396. You mean a liqueur having certain characteristics apart altogether from its origin?—Yes.

14397. (*Chairman.*) What is plain spirit? Will you give us your definition of that?—Plain spirit which we might use?

14398. Yes, plain spirit which you are using. I mean the 99 gallons of which you spoke. What is that made of?—It might be spirit made from cereals or spirit made from molasses in this country.

14399. That being so made, that is plain spirit?—Of course, it is all under plain spirit in this country.

14400. Is that plain spirit a merchantable article?—Certainly.

14401. Under what name?—Plain spirit.

14402. Where is your market?—It depends entirely on what it is put to.

14403. But I mean by itself. Is it consumed by the consumer by itself?—Certainly, plain spirit made from cereals.

14404. But in one sense that would be whiskey made from cereals. I understand that this is something that requires to be mixed before you sell it?—Yes, it is plain spirit mixed.

14405. Will you keep to the plain spirit by itself? Do you sell any plain spirit by itself?—Yes.

14406. To what market?—It may be shipped as whiskey.

14407. Yes, that I can understand, but you are introducing it as a plain spirit. You need not invoice whiskey as plain spirit?—The plain spirit may be invoiced as grain whiskey.

14408. I will take it so. Then you sell it as "grain whiskey"?—Yes.

14409. And it is grain whiskey?—Yes.

14410. If I understand you rightly, as you told Dr. Brown, if in the 99 gallons of this plain spirit which you invoice as "grain whiskey" you put in one gallon of rum, it becomes rum?—No, I did not say that it would become rum.

14411. I beg your pardon, not that it would become rum, but you call it rum?—No, my lord, I said that there would be no objection to putting in one gallon of rum in it.

14412. I do not know who could object as an abstract proposition, but having put it in what do you sell it as?—I do not know. Of course, we have never sold such an article.

14413. I am not surprised at that. What is the smallest quantity of rum placed into this spirit that you do sell as rum or mixed rum? You gave us one gallon in a hundred as what may be done. In your trade what is the smallest quantity of rum that you sell in a mixture?—The smallest quantity of rum in the mixed spirit?

14414. Yes?—I would rather not answer that question, my lord, because so much depends on the price that you are to get for your article.

14415. What is the information you wish to give to the Commission?—It is not so much information as to express the wish that no alteration should be made in the Excise and Customs Regulations with regard to the mixing of British and foreign spirit in bond.

14416. You must allow me to tell you what my own opinion is. If you wish to maintain this state of things you must tell us what the existing state of things is. Have you any objection to tell us what it is your wish to see maintained? Have you any objection to tell us the proportions of the mixture?—In the case of the rum sent to Australia or to New Zealand?

14417. Yes?—In our case as to the proportions of the spirit do you wish me to give you the exact proportions?

14418. I do not want to press you too much, but I should like you to let us know if you ask that the state of trade should be maintained, what that trade is constituted of?—Roughly, two-thirds to one-third.

14419. Two-thirds of what?—Two-thirds of plain spirit to one-third of rum.

14420. Which is the dearer article? If you have to go on the market and purchase it, which do you get cheaper, the pure spirit or the rum?—Sometimes the rum is cheaper than the pure spirit.

14421. What does your mixture depend upon? Why would you mix it? Why not sell the pure rum if that is so?—Very likely the article would be objected to, as the consumer would find that there was a difference in quality. It may be that they do not wish the pronounced Demerara flavour.

14422. Must your rum be Demerara rum? Could you not have any other rum you liked?—We could, but we do not.

14423. Why?—Because we have always found that the Demerara rum gave us satisfactory results, and kept a uniform blend or quality of style.

14424. The customer has got two-thirds of pure spirit to one-third of Demerara rum. Do you know under what name that is sold to the retail customer? I am not speaking of the shipping invoice, but does he get that as rum?—I have no doubt he does, but I cannot speak from knowledge.

14425. You send out an invoice, I suppose, to Australia or wherever it is that it goes to?—Yes, along with the age certificate.

14426. How do you invoice it?—As "Red Star" rum.

14427. What does "Red Star" rum mean?—That is simply our brand, as distinguished from any of the other rums.

14428. Then that is invoicing it as rum?—Yes.

14429. Why should you not tell the person that it is not pure rum, and that it is two-thirds pure spirit, when you have got a broad distinction between the real article and what you are selling?—It is not sold as a pure rum, my lord.

14430. But "Red Star" does not convey that it is impure. You are invoicing it as rum?—Yes, my lord.

14431. You do sell it as rum unless "Red Star" means impurity, which I hope it does not?—"Red Star" is an indication that it is distinctive and not Jamaica or Demerara rum.

14432. That is so, but still it remains rum. Why should you not say "Mixed spirit" in your invoice, at any rate?—There would be no objection to us doing that. It would not make any difference to the sale of it.

14433. What is the difference in price, as a rule, between this mixture of yours—this "Red Star" rum—and pure Jamaica rum or Demerara rum?—Sometimes Demerara has been bought as low as 9½d. per proof gallon, but to-day it is nearer 3s. per gallon.

14434. So we have heard?—Plain spirit, on the other hand, may be bought at about 1s. 2d. or 1s. 3d. per proof gallon.

14435. Does that keep pretty steady in price?—Yes, my lord.

14436. You see, of course, that, at any rate, Demerara rum, as it is now, is much dearer, and is being sold at 3s. as against 1s. 2d. and 1s. 3d. How long has this Demerara rum been at that high price?—Within the past six months.

14437. I do not wish to put anything offensive to you, but under the present conditions of the price of Demerara rum and the price of pure spirit, the more pure spirit you put into your "Red Star" and the

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less you put of Demerara the better for you?—Provided the Demerara rum was high in price.

14438. I said "under the present conditions"?—Yes, my lord, that is so.

14439. Under the present conditions, the more pure spirit you put into your "Red Star" and the less of Demerara rum the better for you?—Yes, if we were to try and work at a uniform price.

14440. But I am working it out as it is to-day, at the present time. We know they vary, but I want you to take the present price. Such must be the result, must it not?—No, my lord.

14441. Why not?—The buyer merely gives a greater price for our article.

14442. But as I understand it, you are the person selling this and sending it out?—Yes.

14443. If you put in more of the low priced article and less of the high priced article and you ask the same price, surely it is better for you?—It would be better, but then you would lose the position on the market—your article would not be the same.

14444. That is not quite what I am on. I daresay what you say is quite right, that, of course, you might lose your custom if you went on weakening it too much. That I can understand. I can understand that as regards the fact of your sale that would be the result. That is so, is it not?—Undoubtedly.

14445. Do you find that you get complaints from your customers that this "Red Star" brand that you send out is too strong or too weak or a bad flavour, or is there any other objection taken to it?—Never.

14446. How do you regulate the quantity that you put in? Is it your own idea of what would suit the public?—Yes. We have a standard quality, and we buy certain grades of Demerara rum which we consider goes well with the spirit, and we keep as near to that standard as we possibly can.

14447. Have you any home trade in this mixture?—None. We have no home trade at all.

14447*a*. Why is that?—We are not in the home trade.

14448. Are there home traders who do deal in similar mixtures for home consumption?—That I cannot answer. I am not aware of that.

14449. Surely it must be known in the trade whether they are drinking this mixture—this so-called rum—at home as well as abroad?—I could not say.

14450. Will you tell me the markets that you have?—Australia, New Zealand, the Australasian Islands and the east of Europe.

14451. Is not there some declaration required for Australia?—Yes.

14452. What is it?—It is a declaration to this effect: That the said rum is the product of Great Britain and the West Indies, and has been stored in wood for a period exceeding two years prior to the date of shipment.

14453. Does your "Red Star" brand come under the necessity of that declaration?—Yes.

14454. What do you say in terms when you send any of your "Red Star" brand into Australia? Do you follow that very language, "that this rum is the product of Great Britain and the West Indies, and has been stored in wood for a period exceeding two years prior to the date of shipment"? Is that what you say?—Yes, that is part of the declaration.

14455. I want to know what you, who have to make the declaration, say. Do you make the declaration in these terms?—Yes.

14456. Should you apply the term "rum" to that which is as to three parts of it pure spirit?—Yes, we apply the term.

14457. Do you not think it would be better, under the circumstances, if you said: "This mixture of rum and pure spirit is composed of such and such materials." I do not know that Australia would accept your spirit under those circumstances, but that would be nearer the fact?—I do not think it would make a whit of difference to the Customs in Australia. They simply wish a declaration as to the age and the country of origin.

14458. But surely in Australia they do drink pure rum as well as this "Red Star" brand?—Apparently they do from the price lists that I see from time to time.

14459. How is the consumer to know whether he is drinking pure Demerara or Jamaica rum, or that you are mixing it, the declaration being the same?—The declaration, of course, cannot find its way to the consumer, but anyone sending out, say, a pure Demerara or pure Jamaica rum would simply declare it as such.

14460. That declaration would, in the nature of things, find its way to the merchant?—It must find its way to the merchant.

14461. If it is sold in bottles, of course, that declaration could be conveyed?—I cannot tell. I am simply the shipper.

14462. (*Dr. Horace T. Brown.*) In this foreign trade you are competing, I suppose, with the Germans?—I have not the slightest doubt of that. If we did not do the trade, the Germans would.

14463. If this British trade were destroyed, it would fall into the hands of the Germans. There is a demand for that kind of mixed rum, or imitation rum, or whatever we like to call it, and if that is not supplied from here, it would be supplied from Germany?—There is no doubt about that. They are quite in a position to supply the article if this country did not. If this country was prohibited, then they would step forward and supply it. They supply it now.

14464. As rum?—As rum, at least, I have no doubt it is supplied as rum. The word "rum" is a general trade term.

14465. (*Chairman.*) You say that imitation rum is supplied as rum by the Germans. Is it not supplied as imitation rum?—I cannot tell what it is supplied as, but I know it is termed "rum," and it is sold as rum.

14466. Is the imitation rum that we have heard of to your knowledge sold simply as rum?—No, there is such a rum as imitation rum, but I cannot tell where that is in use.

14467. (*Dr. G. S. Buchanan.*) Is this German competition merely something that you apprehend, or is it a very active thing at the present time?—It is very active at the present time.

14468. Including the Australian market?—I do not know so much about that. I do not know that the competition there is so very keen, but in other markets it is very keen.

14469. Your point is that there is competition in Australia and generally outside Australia?—Yes.

14470. What I meant was that I should be surprised if with the Australian and New Zealand people who, after all, in their habits and customs are practically like ourselves, there was much of a demand for German rum?—I expect they would take the German rum there if they could not get the rum from this country.

14471. Can you tell me about the age of the spirit that you send? Is it always two years old to Australia?—Yes, it has to be two years in wood now. It does not necessarily follow that it is two years old when it leaves this country, but before duty can be paid on it for consumption out there it must have been in wood for two years.

14472. For Australia you have to declare the age in the case of rum in the same way as you do for whiskey?—Yes, the same.

14473. Do you regard the mixture of whiskey and rum—it is the same spirit as you send out in some cases as whiskey—as a palatable article personally? Is it a thing you would drink yourself?—I could offer no objection to taking it. It forms a wholesome spirit.

14474. That is a point on which I wish information. You said you had not any knowledge of it being sold in this country—not by your own firm, but of similar liquors being sold in this country, so that we have to come to you and ask you if it goes abroad what sort of spirit it is like?—It forms a wholesome spirit.

14475. I see you export other liquors, compounded spirits and so forth. Do those compounded spirits include any form of brandy?—Yes.

14476. Would the material used in the compound be what I may call an essence, or what would it be?—For brandy?

14477. Yes?—No, there would be the pure brandy used.

14478. The flavouring part of it would be pure brandy?—Yes. We, of course, do not make much British brandy, only now and again, but when it is made it is the pure brandy that is used.

14479. You, of course, have experience of taking rectified spirit or grain spirit and mixing flavouring matters with it for your export trade?—Yes.

14480. Those are these compounded spirits?—Yes.

14481. Is rum included in that?—In the compounds?

14482. Yes?—It might be because the compounds in some markets are termed and commercially known as rum.

14483. Have you had any objection taken by the Australian or other authorities to your spirit?—Never.

14484. (*Mr. Guillemard.*) I should like to know whether this mixed spirit that you make is ever sold under any name such as West Indian rum?—No, we have never sold it as that.

14485. Under what name do you sell it?—That which goes to Australia we sell as "Red Star rum."

14486. When it goes to Australia are you able to sell it as "Red Star Rum" without any qualification? I thought the Australians required you to put something on it.

14487. (*Chairman.*) Will you read the declarations that you put on it?—After declaring the name of the steamer on which the package has been carried, and to whom the shipment has been made there is this declaration: "I further declare that the said rum is the produce of Great Britain and the West Indies, and has been stored in wood for a period exceeding two years prior to the date of shipment." Then we give the shipping marks and the number of casks so that the Customs in Australia see what the article is.

14488. (*Mr. Guillemard.*) That declaration says "The said rum." Where is the rum previously mentioned in the declaration?—The declaration says: "I do hereby solemnly and sincerely declare that I am a director of Thom and Cameron, Limited, and with authority to sign on behalf of that firm who are the exporters of the undermentioned rum."

14489. Then the next thing is "the said rum"?—Yes. "Shipped on the 11th day of July, 1908" to the name of the consignee "in the Commonwealth of Australia." Then it says: "And I formally declare that the said rum is the produce of Great Britain," and so on.

The witness withdrew.

Mr. F. W. Percy Preston, called.

14490. (*Dr. Adeney.*) I believe you are a Director of Preston's Liverpool Distillery Company, Limited?—I am managing director.

14491. Your business is carried on at Water Street, Liverpool?—Yes, and also at Bank Hall Distillery.

14491*a*. What is the nature of the business of your firm?—We are distillers and also exporters.

14492. Distillers of what? What do you distil?—British plain spirit.

14493. Is that grain spirit?—Molasses spirit mostly. There is a little grain, but the bulk of our trade is molasses spirit.

14494. You are proprietors of Excise bonded warehouses?—Yes, and also of a vatting establishment over the top.

14495. You wish to give evidence before the Commission as to the desirability or otherwise that the mixing of rum and plain spirit for exportation should be prohibited?—Yes.

14496. What do you wish to say in reference to that?—I simply say that if that is taken away from this country, the German takes the trade and we lose it. They would send it direct from Hamburg to the West Coast of Africa, where I should otherwise send it, and they would simply take the trade off us, and our trade is ruined.

14497. Do they at the present time import into Australia?—I have got to suit my customers. My customers require a certain class of spirit. I am not talking of Australia at present, but of Africa and the Mediterranean. I have no two-years old spirit, so I am unable at the present time to ship it to Australia. I have lost my Australian trade.

14498. You cannot supply the required declaration?—That is so. I can ship to New Zealand, and I do ship to New Zealand.

14499. Do you know anything of the Australian trade?—I have been in the Australian trade, I suppose, for over 50 years.

14500. You are not aware at the present time that German rum is being imported into Australia, are you?—I could not tell you that. I know we cannot send it, because of the age certificate. We have not got the spirit to send.

14501. What you export is a mixture of West Indian rum and British plain spirit?—Yes, made from molasses, which I call plain spirit.

14502. Could you give us any idea of the proportions?—It varies according to the market.

14503. Could you tell us the minimum?—I do not know that I could tell you the minimum. I have to suit my customer. The nigger will not have too much Demerara rum in his spirit. He does not like it, and if he cannot get the proper proportion in England he would go to Germany to buy it. I do not export to the nigger at all, but I sell through the African merchant. It is all sold through the merchants in Liverpool.

14504. (*Dr. G. S. Buchanan.*) Does the nigger change his tastes when he leaves Africa and goes to the West Indies?—I do not know. I have not been out there.

14505. (*Dr. Adeney.*) So that you are bound by flavour as well as by price?—Absolutely.

14506. Do I understand that the flavour is really the greater factor, or is it the price?—I could not tell you. I have not been on the West Coast myself, but I believe that the nigger will have a certain class of spirit, and if he cannot get it in one market he will get it in another.

14507. The question of price, I suppose, also comes in?—Naturally. If he can buy it cheaper in Germany he will not come to England.

14508. As a matter of fact, do you export rum?—No, not pure rum.

14509. You export in casks?—Yes.

14510. And your casks are marked in accordance with the Customs regulations here?—Yes. I would like to draw your attention to this, that I consider that spirit made from molasses is nearer rum than grain spirit. It is made from sugar and the other is made from cereals. In some parts of Demerara there are a certain amount of patent stills already at work making rum, and mine goes through the patent still.

14511. Do you state, as a matter of fact, that as far as taste is concerned, molasses spirit mixed with real rum is better than grain spirit mixed with real rum?—Yes, I say that molasses spirit mixed with real rum is better than grain spirit mixed with real rum.

14512. The result is better?—Yes, you have two sugars.

14513. (*Dr. Cushny.*) How do you invoice it?—It is really a trade term. A merchant writes to me and he says, "What is your price for African rum," and I tell him what the price is. Another man from Manchester, from where most of the Mediterranean trade is done, writes and says, "What is the price for your Mediterranean rum," and an Australian writes and says, "What is your price for Australian rum," and I tell them. The Excise know the proper thing to put on the cask. We do not work under the Customs, but we work under the Excise.

14514. You do not sell this to the West Indian market?—No, it would not be honest—it would be a fraud.

14515. (*Mr. Guillemard.*) I take it the terms "Australian rum" and "Mediterranean rum" are trade terms, and are recognised in the trade?—Yes. I

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have been talking to a few of my African merchant friends and they say that the invoice never goes out to the nigger because most of the trade is done by barter there. The nigger would exchange for spirit, palm oil, etc. He knows what he is getting, and he is accustomed to have it. It is not invoiced to him at all because it is all done by barter.

14516. When it reaches the nigger there is no invoice? The invoice would have no meaning to him?—No.

14517. According to your view the nigger is not prejudiced in any way?—No, he knows what he is buying, and it is what he likes.

14518. The dealer who buys from you knows perfectly well what it is?—He is suiting the nigger's taste, and he is only buying the rum.

14519. The merchant who buys from you knows perfectly he is not buying from you, and you are not selling to him, what is known as rum?—That is so. We could not do it at the price.

14520. Now as to the New Zealander. Have you any declaration that you send with this to New Zealand?—Yes.

14521. What is it?—We put on a declaration "R. W. P. Rum," and we also give a certificate of the origin—"England and Demerara."

14522. Is that a certificate sent out to New Zealand, or is that certificate drawn up in New Zealand?—We put it at the bottom of the invoice.

14523. But my point is this: you give a certificate?—Yes, we certify that its origin is England and Demerara.

14524. You give a certificate with the spirit that you send to New Zealand?—Yes.

14525. Is that certificate a thing that is demanded from you by the New Zealand Government?—Yes.

14526. In the form prescribed by the New Zealand Government?—No. It is simply written with pen and ink on the prepared invoices.

14527. In any form you like to draw it?—In the form we always send it in.

14528. It is not the same as with Australia?—No.

14529. What do you write?—We simply certify that it is the manufacture of England and Demerara.

14530. (*Chairman.*) Will you read the exact words?—"Certificate of origin," and on the invoice it says "English and Demerara," that is what we put inside it.

14531. That is the whole of it?—Yes. Of course, Mr. Nicol has already told you what you have to put on with regard to Australia, but there is no age limit here.

14532. You do not call it rum in that thing?—No. I simply say that its origin is England and Demerara.

14533. What is it you invoice it as?—An Australian rum—"R. W. P."—which is more a trade term than anything else.

14534. There seem to be three different classes of rum that you send out as mixed—African, Mediterranean and Australian?—And New Zealand.

14535. Do they vary in composition?—Certainly.

14536. Is it climatic or what is it?—No, the nigger would not pay for the Australian what he could get the African at. The African we send out to the niggers is not as good a rum as we send to Australia.

14537. I thought with the advance of civilisation they did not like spirits so much?—I do not think they are all tectotallers.

14538. I understood you to say that they did not like a strong spirit?—They take it at weaker strength than in Australia. They take it about 15 under proof.

14539. That is the African?—Yes.

14540. I have no doubt that is known in the trade as a mixture?—Certainly.

14541. Who gives the variation or proportion of the different ingredients? Do you do that from your knowledge of the trade, that is to say, from your knowledge of this gentleman of whom you have spoken as the nigger?—Yes.

14542. You prescribe to meet his taste?—Yes.

14543. He is your public?—Yes

14544. And you succeed with him?—Yes.

14545. And I suppose you care for nothing else?—We give him the best spirit we can.

14546. But that is to please his taste?—Yes, otherwise we should not get his trade.

14547. I suppose he does not know anything more than, or care for anything more than the person from whom he buys?—In the same way as an Englishman likes a Scotch or an Irish whiskey, he likes a rum.

14548. Does he know anything about the brand?—I do not know anything about that.

14549. Would he know anything of the name? He would think he was drinking rum?—He would buy from the African merchant, but how they sell it I cannot tell you. It is simply called African rum, and I do not suppose the nigger cares whether it is plain spirit as long as he gets some.

14550. The exact proportions would not be known?—Not at all.

14551. The fact that it was mixed would be known?—Yes, certainly. That is on the cask according to the Excise regulation.

14552. And that is made quite plain to your dealer?—It is prescribed on the cask.

14553. And on your invoice?—No. We call it "African," which is the trade term.

14554. You tell me that it is known as being a mixture?—No, there is nothing on the invoice to that effect.

14555. You mean that "rum" is on the invoice?—Yes.

14556. What does "African" mean?—It is a trade term.

14557. That is, to the mixed trade you have been dealing in?—Yes, for many years. The merchant knows.

14558. I am speaking of the merchant?—Yes, certainly, he knows.

14559. To whom you send your invoice?—Yes, he knows absolutely.

14560. What happens to be on that, I suppose you do not know?—I only put "Free on board, Liverpool."

14561. The same observation applies to the other mixed market?—I do not export at all myself. It is all sold either in London or some other town.

14562. Do you export to Africa?—No, that is done through merchants.

14563. That is the same as the other market? Its conditions are the same as regards Africa?—Yes.

14564. The same answer that you have given as to the African market would apply to those markets?—Certainly, it is just the same.

14565. Do you think further information could be granted than you do grant? I suppose you would object to give the proportions in any invoice?—It is rather giving our trade away.

14566. Why?—Because somebody might copy the flavour of our rum by using our proportions.

14567. And they would meet the flavour and the taste of the public of whom you have told us?—Certainly.

14568. That is so?—Yes.

14569. Now a question about this German imitation rum. You say if you do not sell it, the German will step in and sell it?—Certainly.

14570. I do not understand that there has been much objection to your selling rum. I do not understand that anybody is objecting to your selling pure spirit and rum mixed, but the question is how far that information should be granted. Do you know what information to grant?—I could not tell you.

14571. You would not know that?—I would not know.

14572. But does the German compete with you now in the West African trade?—If he can get in cheaper than we can he will; he ships direct from Hamburg to Africa.

14573. Does he do it now?—I think our price is below the German price, at the present moment.

14574. That is rather exceptional?—Yes, it is exceptional. The Germans are generally below us in price.

14575. In these spirits?—Yes.

14576. Now you outbid them?—Yes.

14577. (*Mr. Guillemard.*) Is that owing to the bad potato crop?—Yes, owing to the bad potato crop and beet crop.

14578. (*Chairman.*) I understand that they do compete with you?—Yes.

14579. Do you know what the name is that the Germans give the article they sell?—I think they call it anything they like.

14580. But what do they do?—I do not know, but I believe from what I am told by my merchant friends that they can have it invoiced and put whatever they like upon it.

14581. Do they say that it is imitation rum or not?—They allow them to invoice it either as spirit or rum.

14582. Do they put "imitation" on it?—I have never seen it.

14583. (*Dr. G. S. Buchanan.*) Do I understand that the only plain spirit that you use is molasses spirit?—No, I also use grain spirit, but I use the molasses spirit for export.

14584. What do you send out to these different places under the name of whiskey?—I do not ship any whiskey abroad at all.

14585. Or brandy?—No, none whatever.

14586. As to your Australian trade, I understand you were in the Australian trade for 50 years?—Yes.

14587. But you have practically dropped it now?—Yes, until I get my spirit two years old I cannot ship any more.

14588. The imposition of the two-year-old limit for the time has knocked you out?—I have not got any two-year-old spirit to ship.

14589. (*Dr. Adeney.*) I understood you to say you did your mixing under Excise regulations?—Yes.

14590. You are rather singular in that, are you not?—I think we are the only ones.

14591. Do you know of any other?—No, I do not.

The witness withdrew.

(Adjourned for a short time.)

Mr. H. Dunlop, called.

14592. (*Dr. Cushny.*) Whom do you represent?—Boll and Dunlop.

14593. You have been established in Rotterdam, chiefly?—Yes, since 1821.

14594. Is your business there or in London?—In Rotterdam.

14595. How would you define Geneva?—I would say that it was distilled from barley, malt, rye and maize in equal proportions. Sometimes these proportions might alter slightly, but not very much.

14596. That definition is the same for Hollands and old Schiedam?—Yes, precisely.

14597. You do not wish to draw any distinction between the three?—No, not in the way it is distilled.

14598. Would you restrict the manufacture to the pot still?—It is done by pot still.

14599. Not by the Coffey still?—No.

14600. What is your opinion as to the keeping of it? Does it improve by ageing or not?—Not the rectified spirit. The rectified spirit would not improve by keeping, but the maltwine, which is the third distilled—that which is distilled the third time—would improve by keeping.

14601. I am afraid I do not quite understand. Do you keep gin?—No, it is not gin then, it is maltwine.

14602. Which is rectified spirit?—No, it is not rectified.

14603. The grain spirit you keep before you begin to make it?—Yes.

14604. Do you wish to keep grain spirit before you begin to rectify it?—If it is meant for making Geneva of it, no, but if it is meant for making old Schiedam of it, yes.

14605. Would you just amplify that a little, because that is a point that we have not come to before?—If you rectify a spirit rather highly it would not improve by keeping, but if you do not rectify it the impurities which it contains would change gradually into certain others which would give a better flavour to it.

14606. And the spirit that has not been kept you use for making Geneva?—Yes.

14607. But if you wish to make Schiedam you would keep this thing for some time?—Yes, precisely.

14608. What is Hollands, exactly?—Hollands is rectified spirit, the raw spirit rectified with juniper berries.

14609. Then that is the same as Geneva?—Precisely.

14610. Does your firm follow this method?—Yes.

14611. You make old Schiedam?—Yes.

14612. How is the spirit kept?—It is kept in big vats, some of which contain 14,000 or 15,000 litres, which is equal, I should say, to 3,000 gallons, and it is kept in these wooden vats, which are very old, so that they do not impart any wood flavour to the spirit.

14613. What strength do you keep it at?—It is 20 under proof, I think.

14614. There is some difficulty about your definition of this spirit. You say it is a spirit rectified to not over 20 under proof. We should scarcely consider that rectified?—I should have said distilled. I did not quite see the difference between the two words.

14615. Then you think that old wood vats are necessary?—Yes.

14616. New wood vats would not have the same effect?—No, I do not think they would.

14617. This is old Schiedam?—Yes.

14618. Other Schiedam gin is not kept in this way?—No.

14619. This is a special name of your own?—Yes.

14620. (*Mr. J. Y. Buchanan.*) I should like to quite understand this. In making your Geneva, Hollands and old Schiedam you use grain spirit?—Yes, it is made of grain spirit.

14621. Such as it might be for patent still whiskey?—Not patent still.

14622. Pot still?—Yes.

14623. Is it always pot still?—Yes.

14624. Then, if you are making Geneva and Hollands, you put this spirit as you buy it along with the juniper berries and you distil it?—Yes, that is the process.

14625. That you place in your vats?—Not to make old Scheidam.

14626. This is for Geneva and Hollands?—Yes.

14627. You run that into a vat from which you distribute it to the consumer?—Yes.

14628. How long do you keep it in the vat?—That all depends. Sometimes it may remain there a long time and sometimes not.

14629. But it is not essential to remain a particularly long time?—No.

14630. When you are going to make old Schiedam you have the same spirit but you keep that?—Yes.

14631. For how long do you keep it generally?—A year or two.

14632. Then you treat the juniper berries in exactly the same way as for gin and Hollands?—Yes, very much the same way.

14633. And distil it?—Yes.

14634. Then that is old Schiedam which you run into vats?—Yes.

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14635. Do you make it essential to keep that?—Not after having been kept.

14636. Then that goes out to the consumer from these vats?—Yes.

14637. That is the whole process?—Yes.

14638. The difference between the old Schiedam and the Geneva and Hollands is that the spirit that you distil with the juniper berries is kept for a time before being used for making old Schiedam?—Precisely. For Geneva it is not kept.

14639. For Geneva and Hollands?—That is so, you have quite understood me.

14640. (*Dr. Adeney.*) How many distillations does the grain spirit go through before the flavouring material is added?—Three I think, and then the fourth time that is our business—we rectify it with juniper berries.

14641. Do you know the strength at which the different distillations of the grain spirit are run?—I should think the first time it is 12 per cent., then 24 or 30, and then 46.

14642. Is that per cent. of alcohol?—Yes.

14643. By volume?—Yes, I think by volume.

14644. (*Dr. Horace T. Brown.*) You make a great point of using the pot still, you say?—Yes.

14645. For your old Schiedam?—Yes.

14646. Is it the same form as that used in Ireland and Scotland?—I could not say, because I have not seen those, but it is like the one that I see here—the principle is the same.

14647. It has no rectifying column or rectifying head?—No.

14648. Do you attribute any of the qualities of the Schiedam to the particular mode of fermentation? Do you consider, for instance, that it is desirable or necessary to ferment the whole mash?—I think the whole mash is fermented together.

14649. That is the general custom?—Yes.

14650. Do you think that it is essential for getting the particular flavour that you want?—Yes, I should think so.

14651. Have you had any experience of the fermentation method by the Amylo process?—No, I do not know anything about that.

14652. (*Mr. Guillemard.*) You say that in your opinion the Geneva, Hollands and old Schiedam ought to be made from grain only?—Yes.

14653. What is your reason for that? Is it because it is well established that it has been made from those materials for some time?—It has always been like that.

14654. It is not on account of health?—I am not a medical man, so I could not say.

14655. You would not wish to speak as to that?—No, but that has always been the method that has been employed.

14656. Then also I wish to ask you a question with regard to your proportions. You say the raw material should be malt, barley and maize—each one-third?—Yes.

14657. No doubt you are aware that some time back, say, 100 years ago, the proportions were quite different. We had it in evidence the other day?—Yes.

14658. You have read that evidence?—Yes.

14659. Why do you wish to stereotype the proportions in which the materials are at present?—That is done nowadays, because they get a certain flavour in that way, and that is the flavour they want.

14660. Yes, but 100 years ago they got the flavour they wanted by a different proportion. Is it possible that perhaps in the future you may want to vary those proportions?—It may be possible.

14661. You suggest that if those proportions are not complied with you would not allow them the name? You would not go as far as that, would you?—I would not be very strict. In a general way I would say that that is the method that is now employed.

14662. You do not want to do much more than say that that is the best method in use at present?—That is so.

The witness withdrew.

Mr. W. H. Garrett.

Mr. W. H. Garrett, called.

14663. (*Dr. Adeney.*) I understand you are the managing director of Messrs. George Idle, Chapman and Co., Limited?—Yes. I have been in the trade for about 30 years. Our firm was established in 1760. We are sole agents in the United Kingdom for Cusenier, who are the largest manufacturers of liqueurs in the world, and also large vineyard proprietors and brandy shippers of Cognac. We are compounders of cordials ourselves, and have specialised, I may say, in liqueurs since 1845.

14664. Your head offices are where?—At 6 and 7, St. Mary-at-Hill, Eastcheap.

14665. Could you tell the Commission what is understood by or what is the difference between cordials and liqueurs?—A liqueur is a name that is more applied to foreign products, and cordials is the name which is given to what I might term British cordials or liqueurs. Really, very much of the same process is employed in making foreign liqueurs and British liqueurs, but there has always been the name "cordial" applied to British liqueurs, and "liqueur" being a French word has been taken to mean that it has been made abroad. That is the only explanation I can give you.

14666. Would you give us the names of them?—Yes, for example, cherry brandy, ginger brandy, apricot brandy, which we make with fresh fruit, sugar candy and brandy, cherry whiskey, peach brandy, etc.

14667. (*Chairman.*) Is orange brandy a liqueur?—Orange brandy would be more or less made from oranges. Curaçao would be a liqueur that came from abroad, we should call it a cordial if it were made in the United Kingdom; it can be equally well made in the United Kingdom provided Curaçao oranges are used.

14668. (*Dr. Adeney.*) May we take it that cordials and liqueurs are flavoured sweetened spirits?—Yes, I should say they all were.

14669. Can you tell us anything of the kind of spirits that are used for the formation of these cordials?—Yes. Take, for example, sloe gin. Sloe gin would be made with gin, and would be a gin placed on sloes and the flavour extracted by leaving it on the sloes. We generally leave ours about six months on the fruit before we draw it off.

14670. For your cordials, what kind of spirit do you use?—It depends. If we are making cherry brandy we should use French brandy. With cherry whiskey we should use whiskey; if it were cherry gin we should use gin, and if it were sloe gin we should use natural gin. That is our description. We call the article whatever it is actually composed of, that is to say, if it is cherry gin it is composed of cherries and gin, and so with apricot and brandy or peaches and brandy—I mean by that, fresh fruit. We do not use essences.

14671. Do you think it is desirable to place any restriction on the materials used in the formation of these spirits?—It seems to me that the difficulty is almost insuperable. I do not quite see how you could possibly do it. I think it should be left to the guarantee of the firm, and the article speaks for itself. If you guarantee a thing is so-and-so, if your customer believes in your guarantee, he will accept your guarantee, I take it.

14672. That, of course, includes the spirits you employ, whether they are patent still or pot still spirits?—I do not know whether your reference also goes to the export trade of British cordials. I think that something should be done to foster the trade. I think considerably more trade would be done if there were

less difficulties placed in the way of the British merchant.

14673. I am afraid it does not?—There is one question, if I might interpolate a remark as a dealer in all liqueurs, in Hollands and Geneva, and so forth, which the last witness, if he does not mind my saying so, omitted to state, that old Schiedam, besides being made as he suggests, is sweetened. We sell both Hollands and old Schiedam, and we get a high price for the old Schiedam, but I have always understood the old Schiedam was more of the nature of liqueur, Hollands being dry. I always understood that, and I have been in the trade for some considerable time.

14674. I see in your *précis* you express the opinion that it would be desirable to place restrictions on the materials employed. What, precisely, were you referring to then?—Again the question of using essences in the same way as gin. That is really what I had in my mind. Of course, it is quite easy, if essences are used, to cheapen the cost of production.

14675. The essences themselves might be adulterated?—I have never had any experience. We do not use them so I am afraid I cannot give you that. Those samples which we have known as made with essences never appeal to me at all.

14676. With regard to age, do you think it is desirable to require a minimum age?—Are you speaking of cordials and liqueurs?

14677. Yes?—No, I do not know that it is desirable to require a minimum age. I think as far as keeping a liqueur in bond any length of time, if it is made with good material to start with, it improves, but that is merely from the connoisseur point of view. I do not think there is any other reason to keep liqueurs in bond for any length of time.

14678. Do they improve in bottle?—I think only to a very limited extent.

14679. Is old brandy a liqueur?—Yes, but that is matured in wood. We call that a liqueur. Brandies are matured in old wood, and kept a good many years before they are put in bottle. They keep them in old casks which have been thoroughly well seasoned and would not impart any woodiness to the brandy any more than an old seasoned cask would to gin. It is on the same principle.

14680. That would improve in time as Fine Champagne does?—Yes.

14681. I see you express an opinion with regard to brandy on the subject of ageing?—Of course, I should like to see brandy kept in bond at least two years in the same way as new whiskies.

14682. Do you mean in British bond?—There would be a difficulty, because supposing that brandy has been kept on the other side it would be rather penalising them to come here and remain two years before it could be sold, although it would improve the article. There is a very marked difference between brandy which you are offered, we will say, lying on the other side and that which has been in this country for a year or two. You would hardly recognise them. The improvement is very great, not so much in the older brandies as in the younger brandies. They mature so much more quickly on this side than they do on the other.

14683. (*Dr. Horace T. Brown.*) What are the particular points of view from which you consider it desirable to age brandy?—That is more particularly the newer brandies.

14684. You say in your *précis* that it is desirable from several points of view. What was in your mind at that time?—I did not dictate that letter. I was away, but they knew my views. I think the consumer would be benefited by having a brandy which is kept. My own idea may be wrong. I do not know anything about it from the medical point of view, but I think it is really the new spirit that does harm, and I think that if it were kept in bond it would improve from the consumers' point of view.

14685. You think from the health point of view it would be desirable?—Yes, I think from the health point of view it would be desirable and also I think the cheaper articles would not improve, and therefore it would not pay to ship them. That is the point of view I had in my mind.

14686. As regards compulsory bonding, it is from the health point of view. The public could look after the taste?—Yes, from the health point of view I think it would improve matters if all spirits were kept in bond with the exception of gin.

14687. You are speaking of the general idea?—That has always been my view, that there is a great improvement.

14688. It equally applies to wine, does it not?—No, not at all.

14689. Wines improve very much by ageing. Would you compel the wine merchant to keep his stock up to a certain point?—Some people like drinking new wine; it is a matter of taste.

14690. Possibly some people like new spirits, too?—That may be so, but I should think they are in a minority.

14691. (*Mr. Guillemard.*) In reply to Dr. Adeney you said you thought it would be desirable that there should be declarations made as to the materials and process of manufacture and preparation of the cordials and the liqueurs, but that you thought it would be very difficult to put them into operation?—It would have to depend on the guarantee. Any firm of manufacturers would say, "We guarantee this is made from so-and-so." That is the only thing.

14692. As to the cordials that you make as distinct from the liqueurs you import, where do you make them? To begin with, are they made from duty-paid spirits?—Yes, we are obliged to make them from duty-paid spirits. We wish we were not, as in France. That is one of the matters I wish to speak about.

14693. You cannot make any of these things in bond?—No, I wish we could. You could imagine when you are making, as we do, a large quantity, the amount of interest we lose on duty which we have to pay not only while we are making it but during the time that we are leaving it in cask while it is maturing. That is where the Government do not foster the British trade.

14694. The point I am coming to is this, that the reason why you say it is difficult to put into operation declarations as to materials and processes, is that your manufacture is not conducted under supervision of any sort?—Yes.

14695. Suppose you get an unscrupulous trader—I hope there are not any—in the trade, the public would be simply dependent on his word?—Yes, and on their own taste, too, of course.

14696. I meant beyond their taste?—That is so.

14697. Any declaration of that sort would perhaps do more harm than good?—I do not know that it would do any harm.

14698. You do not think any suspecting person might be comforted by a declaration, though it was untrue? You do not think it would have that effect?—I should hope he would not take sufficient of it to do him any harm. That is the only answer I could give to that.

14699. (*Mr. J. Y. Buchanan.*) I want to ask you a question about your cordials. I understood from what you said, to take for example cherry brandy, that you buy the brandy?—Yes.

14700. Then you allow the cherries to sojourn in that brandy for six months or so?—Yes, that is our usual time.

14701. Then you draw it off clear and do not distil?—Yes.

14702. So that it is really a cold infusion of cherries in brandy?—That is so. Of course, there is sugar; it is sweetened.

14703. They are all very sweet, are they not?—We do not make ours very sweet.

14704. But as a rule they are sweet?—Yes, as a rule they are.

14705. You do not make a strong infusion, say, once for all, of these cherries in brandy and then mix a certain proportion of that with brandy to make it up?—No.

14706. Nor do you make every separate batch on its own merits with the cherries?—It is all drawn off with so much brandy and so much liquor, that is to say, water, so much sugar candy, and so much fruit—

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that is drawn off into vats and sold just as it is. Of course, it may be clarified if it is not clear.

14707. That is the way you make all of them?—Yes.

14708. With Curaçao, it is made with oranges?—Yes.

14709. (*Chairman.*) I see you call yourself a cordial compounder?—Yes.

14710. What is the meaning of "compounder"?—We compound these cordials, that is to say, we make them. I understand the word "compounder" means a maker. We are makers practically. "Compounder" is the word used because we have to take out what we call a compounder's licence.

14711. You do not hear people say that they are compounders of whiskey or gin?—No, it is simply that we have a compounder's licence for making these cordials. Any merchant who makes these cordials is supposed to have this compounder's licence. That is why we describe ourselves as compounders. We are really makers.

14712. (*Dr. Horace T. Brown.*) It is an Excise term?—Yes.

14713. (*Chairman.*) You do treat old brandy as a liqueur?—Yes.

14714. You do not find any labels put upon those except to say that it comes from some particular vine, and then there is generally the age of the brandy?—You are speaking now of liqueur brandies?

14715. Yes?—Usually with liqueur brandies we put the vintage on the neck of the bottle, or on the label.

14716. That is all you find necessary?—Yes, unless it is a Grande Champagne—we should put that.

14717. I suppose you, as a compounder, could not tell the public of what you compound some of your liqueurs? Would you like to give that information?—Do you mean as to the age?

14718. No, as to the materials of which you compound?—In our price lists which we issue we usually describe what it is composed of. It is made with fresh fruit and the basis of French brandy, or whatever it may be. We should not mind that at all. I do not say the proportions, but otherwise we should not mind describing what it was made of.

14719. Take, for example, orange brandy. What information do you give of that to the public to whom you sell?—We should say that it was made with the finest Seville and sweet oranges, and the basis old brandy.

14720. I suppose in orange brandy there is something in it of orange?—Yes, it is made with oranges.

14721. You would not give the proportion of materials nor would you wish to do so?—No, we should not wish to do that because it would give away how we make it, of course.

14722. (*Dr. G. S. Buchanan.*) Do I understand that you, as a compounder, make in this country various liqueurs?—Yes.

14723. Then as to the materials, I think you have said that in the case of cherry brandy it is a brandy with cherries and the other ingredients?—Yes. I may say there is no other ingredient but sugar candy.

14724. In the case of other liqueurs, I suppose the basis would in some instances be plain spirit or rectified spirit, would it not?—No. For instance, the only other cordials we make would be, say, cherry gin and sloe gin. Cherry gin is made with gin which we buy, and cherries, with the sugar candy, and that is all.

14725. (*Dr. Adeney.*) Do you use whiskey at all?—Yes, we make cherry whiskey.

14726. (*Dr. G. S. Buchanan.*) That is your practice, because, I suppose, you found it most satisfactory?—Yes.

14727. Would you go so far as to say that in making liqueurs of that sort anything that was called brandy, cherry brandy, and so forth, ought to be prepared with brandy and not with rectified spirit?—Personally, I think it would be a false description to call a thing cherry brandy if it were made with plain spirit.

14728. I suppose that view is not universally held by all compounders?—I do not know, but personally I do not see how you can say a thing is cherry brandy if you do not put any brandy into it.

14729. We had a gentleman here this morning who made brandy, it is true for export, with brandy and plain spirit?—That is my complaint. That is exactly the point.

14730. You do not think that selling plain spirit with essences as brandy or rum is honest trading?—No, I do not think that it is honest trading, if you want my opinion.

14731. In connection with any of these liqueurs, have you any use for essences at all? Of course, there are a large number of essences that can be obtained from essence manufacturers that are on the market. They are quite well-known articles?—We do not use them. Any flavour we want we extract from the article we are using, whatever it is.

14732. As a compounder, what amount of supervision or control do you get from the Excise authorities? Do you have a still?—No, we are not allowed to.

14733. Then the spirits you receive are duty paid?—Yes.

14734. In what way do the Excise authorities come across your place of manufacture at all?—They come in to examine the permits which we receive with all duty-paid goods or to examine the Excise certificates as the case may be, and to check the permits which we give when we send out either liqueurs or any other spirit.

14735. That is when you are exporting?—No, when we are sending them out duty-paid they have to be accompanied by a certificate.

14736. (*Dr. Horace T. Brown.*) A certificate of the strength of the spirit?—Yes, that is declared on it.

14737. Do you have to determine that spirit again by distillation before you can make a declaration?—No, because when we get a permit, if it is a foreign spirit or brandy, it comes in under a certain mark. For instance, gin would come in under "X" whatever the strength was, and we should permit it out using the same denomination of "X" or whatever the strength under proof might happen to be.

14738. It is diluted to a great extent by the fruit juice?—The fruit dilutes it, and whatever liquor is put in dilutes it.

14739. You cannot get the same strength out again?—No, we do not always get it out. They give you a certain margin. We know exactly what we put in. Say, for the sake of argument, that it is 50 under proof or 40 or 48, we should permit it out at that strength.

14740. Although it would not distil at that?—That is the loss in the fruit, of course. When we are exporting we have to make our cordial, or whatever it is, cherry brandy or cherry whiskey, with duty-paid spirit. We send it to bond and we do not get back from the Customs the same amount of money which we know we have expended on the duty.

14741. You send it to bond?—Yes, and when it is exported we get a drawback. They take a sample out of the cask for distillation and declare it to be a certain strength, and give drawback accordingly. The drawback is not the equivalent of the duty paid by us. That is the loss from the fruit.

14742. (*Dr. G. S. Buchanan.*) To go back to the Excise visits for the moment. Are the Excise officers, when they visit your premises, in any way informed, or can they inform themselves with regard to the actual processes that are carried on?—No, they never supervise any of our operations, because our cordials are made with spirit which has paid the Government duty.

14743. And it is not necessary for the purpose of determining the alteration that the spirit has undergone before it has got out, that they should have any information with regard to the addition that has been made to it?—I take it not. The Government, when you pay the duty, say: "You can use this as you think fit." That is in contradistinction to the usages abroad. I do not know whether it would interest you, but I may say that abroad, where all their operations are done, they make the declarations, so that their capital required for a very large business would not be so much as would be required in this country, because it is done under supervision, that is to say, they make their declarations, and do not have to pay duty unless it is for home consumption.

14744. Could you tell me this about brandy? You import brandy I understand?—Yes, largely.

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14745. How do you receive brandy from abroad in regard to any guarantees or statements?—We receive from Messrs. Cusenier, when they ship us brandy, what is called the "acquit blanc," or white certificate.

14746. Would you extend that? We have hardly touched the question of brandy?—This is a certificate which is granted by the French Government that the brandy is distilled from wine only—since, I think, the Act of August, 1905, which came into operation this March. The law against frauds, as I think it is called, is very much more stringent there. Cognac brandy can only be called Cognac if it is made from wine grown in the Charente district. Grande Champagne can only be so called if it is made in the particular districts where the wine is grown. That is a matter which might well come before the Commission, as working hand in hand with the French Government, who are desirous, as far as I know, of safeguarding the exporter. If that brandy is branded so-and-so it is a guarantee, so far as the Government is concerned, that the brandy has been made only in that particular district.

14747. (*Dr. Horace T. Brown.*) By any particular process?—By pot still.

14748. Is it guaranteed pot still?—That I do not know, but I imagine so. Certainly as far as I know all the principal brandy shippers use the old-fashioned short head pot still—what they call the brandy still.

14749. (*Dr. G. S. Buchanan.*) The brandy that you get is guaranteed by the French Government. Is that a general mark which attests that either the labels or the invoice is correct, or does it contain of itself all the information that the Government give?—No, my later remarks, I take it, will only refer to the branding of the casks. The *acquit blanc* was granted on request, and we used to brand our cask "pure grape," and Messrs. Cusenier shipped brandy to us with this white certificate to show that as far as they were concerned it was distilled from wine only.

14750. Besides the brandy that comes over to this country with the white certificate, there is other brandy that is not so certified?—Yes.

14751. The assumption is that that brandy may or may not be the juice of the grape?—It may or may not.

14752. So far as your experience goes, have you any reason to believe that that guarantee which is given by the French Government with the white certificate is of substantial value?—I believe it is a sincere guarantee.

14753. (*Mr. J. Y. Buchanan.*) Do you know what means the French Government takes to convince itself that this brandy with which you get the *acquit blanc* is really distilled from wine and in the particular districts?—I do not know how they know the latter question, but the first question I should say, speaking from my own knowledge of Messrs. Cusenier—I do not know the practice of other shippers—but they have nothing but wine in their distillery, I presume. I do not know what the mode of the French Government is in ascertaining it.

14754. They do not have inspectors?—Yes, I believe they have inspectors, but how they inspect I do not know. Of course, generally speaking, in the various districts there are distilleries; for instance, Messrs. Cusenier have a distillery in the Grande Champagne district where they distil all the wine that is grown in that particular district.

14755. Have they inspectors visiting their places?—Yes, they have inspectors visiting their places at the time of distillation as we have here.

14576. That is what you believe?—Yes.

14757. (*Dr. G. S. Buchanan.*) I notice in your *précis* that you deal with imported sweetened spirits in connection with your liqueur?—Yes, that is a description of liqueur.

14758. Can you tell me what unenumerated unsweetened spirits consist of?—That, I should think, would be principally absinthe and Kirsch, because it was not until recently that it was supposed to be sweetened. The Government had an analysis made and they added duty on sweetened spirits as well as the ordinary duty.

14759. With regard to the quantities that were given to us early in our inquiry of the unsweetened, I see that, for example, from Germany we got 434,000 gallons in 1907. The other countries are smaller, and they are about 5,000 gallons each from the Netherlands, France, and the United States, and so forth. They are all classified as unsweetened spirits unenumerated?—I should not have thought we imported as much absinthe as that.

14760. I understand that unsweetened unenumerated includes plain spirits not being liqueurs, brandy, rum or Geneva, or any spirit that has a special name?—Yes.

14761. It would include potato spirit?—Yes.

14762. Therefore that 434,000 gallons would probably be potato spirit?—Yes.

14763. Could you tell us what use that is put to in this country after paying duty?—No, I do not know. We do not buy it and we do not deal in it. I could, of course, only tell what I have heard that it is used for, but I have no actual knowledge of what becomes of it.

14764. What would be the ordinary use of it?—Plain spirit might be used for blending with rum or blending with whiskey or blending with any other spirit, as a matter of fact, but there could only be one object in keeping it.

Mr. W. G. Masters, called.

Mr. W. G. Masters.

14765. (*Mr. Guillemard.*) I believe you are a director of Messrs. W. H. Chaplin and Co., Limited?—I am.

14766. The firm are wine, spirit and liqueur merchants?—Yes.

14767. I understand that with regard to the liqueurs and cordials you are not engaged in the manufacture of any cordial altogether?—Not at all.

14768. And consequently you only address yourself to the question of the sale as merchant?—Yes.

14769. Looking at the matter as a merchant do you think that any advantage would be gained by requiring declarations as to the materials and processes of manufacture of the various liqueurs and cordials?—No, I think not. I think the only thing to guard against is deleterious materials.

14770. Have you any reason to think that they are used to any extent?—No. One hears of essences being sometimes used. That is all I have heard of.

14771. I have heard of essences, too. Would the essences be deleterious necessarily?—I should not like to say that they positively are.

14772. I did not know if you had any knowledge on the point?—No, I have no knowledge of that.

14773. It is like giving a dog a bad name?—Quite so.

14774. You have no special knowledge on the subject?—No knowledge at all on that.

14775. Towards the end of your *précis* there is a point I should like to ask you about although I do not really think it comes within the terms of reference to this Commission. Perhaps I might go so far as to let your views be known, although I do not think we can discuss it at any great length. It is with regard to the manufacture of liqueurs and cordials, not from duty-paid spirits?—From imported fruits that have been fermented here.

14776. What is your objection to that?—I should like to say, if that spirit were made from cereals, we should have to pay 11s. per proof gallon for it. For some reason or other the Government do not move in the matter, so that in this case, if the spirit is only fermented from fruits you may use a large proportion of spirit which costs nothing for duty.

14777. (*Chairman.*) How would you get your spirits for nothing?—There is no duty to pay.

14778. (*Mr. Guillemard.*) I quite see the main trend of your argument, but do you think as a rule they do get it for nothing?—Almost for nothing.

14779. I think so far as this manufacture goes on—I do not think it goes on to a very large extent—the

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basis on which it is very largely made is of two or three things, raisins, currants and sugar?—Yes.

14780. They all pay duty?—Yes, they pay duty, but it is a very very small duty—it is infinitesimal.

14781. You pay less duty, but you do not get it for nothing?—That is so, the duty is quite fractional, comparatively. It is really a most important point, I think, from a trade point of view.

14782. You must leave it at that. It is outside the reference.

14783. (*Dr. G. S. Buchanan.*) With regard to absinthe, do you import absinthe?—Yes, we import a little.

14784. Can you tell me what the law is with regard to the importation of absinthe? There is no prohibition in this country?—No.

14785. There is a prohibition or restriction in some other countries?—Yes, I have heard recently through the papers that they are about to prohibit it in Switzerland.

14786. It is prohibited in Belgium?—Yes, I think in Belgium, too.

14787. I want to ask you one question as to the deleterious properties of absinthe. You have referred to that here and have said that the deleterious materials are used and that in one sense absinthe is deleterious?—Only because it has been found to be so in France and other countries.

14788. That is on account of the essential constituent?—I think so.

14789. It is wormwood?—Yes.

14790. Do you know whether there are particular varieties of absinthe in accordance with the quantity of the wormwood extract that they contain?—No. I know only two brands that we deal in as merchants.

14791. For the moment I was thinking of the question of the drug, and with regard to absinthe, whether one had any idea as to the quantity of the drug that it contained?—I could not say as to that at all. It is very very little of absinthe that is sold in this country—very little indeed. I suppose, as one of the largest handlers of it, we sell anything from 100 to 150 cases a year only.

14792. (*Mr. Guillemard.*) A case being what?—Two gallons.

14793. (*Mr. J. Y. Buchanan.*) There is none made in England?—It is not made in England, but it is made in Switzerland, and I think they make it in France, too.

14794. I mean there is none made in the British Isles?—There is none made in the British Isles, at least not to my knowledge.

14795. (*Dr. G. S. Buchanan.*) Do you deal with these brandies under fancy names—cherry brandy, and so on?—Yes, we deal in them.

14796. Would you take the same view as the last witness, that if you have a material like cherry brandy it ought to be made of brandy?—Yes, I should say the basis should be brandy.

The witness withdrew.

(Adjourned to to-morrow at 12 o'clock.)

TWENTY-EIGHTH DAY.

Wednesday, 22nd July, 1908.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C

G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. V. SYMONDS, Esq., (*Secretary*).

Mr. A. C. THOMPSON, called.

Mr. A. C. Thompson.

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14797. (*Chairman.*) I believe you are a member of the firm of John J. Anderson and Co., Limited?—That is right.

14798. What is your business?—Principally dealing in rum and spirits generally.

14799. You have a brand which is known as "Liquid Sunshine"?—Yes. It is a blend of rums both of pot still and patent still.

14800. Do you manufacture it or only act as merchants?—We only blend it and sell it under our brand of "Liquid Sunshine." We cannot make it.

14801. You have a high estimation of the good qualities of rum?—I have.

14802. And of the sustaining qualities of rum?—Yes.

14803. Do you import from the West Indies?—We do.

14804. Where do you get your rum from principally, is it from Jamaica or Demerara?—The greater quantity is that which comes from Demerara, certainly.

14805. Which is the higher price?—Jamaica rum, as a rule, is the higher. It was the higher till within the last week. I believe the price of Demerara rum is now a few pence higher than Jamaica rum.

14806. As a rule the price of Jamaica rum rules higher?—Yes, very much higher—30 per cent.

14807. Are they both pure liquors according to you?—Yes.

14808. Is there any particular advantage to the public that you know of in differentiating by name or otherwise between the two?—None whatever, I should say.

14809. Speaking generally with regard to the trade what do you say as to the advisability of requiring declarations of the quality of rum?—Of the quality or style do you mean?

14810. First of all, take a declaration as to the place from which the rum comes?—It may be material in the interests of those who produce it, but I do not think it is, because the thing must find its level from the requirements of those who use it.

14811. Those who produce it are paid by the merchant?—Yes.

14812. The invoice protects them?—Yes.

14813. The merchant knows whether he ought to pay Jamaica price or Demerara price?—Yes.

14814. Now will you go beyond that trade to the consumer? Is there any declaration that can reach the consumer which you think would be of benefit to him? I am speaking of the drinker of the rum?—It would be of no use to him, because the man who drinks Demerara rum will not touch Jamaica rum. That is why there is so much more Demerara rum sold than Jamaica rum.

14815. They are different in flavour?—Yes, quite different.

14816. He is protected by his taste?—Yes; he does not care for the Jamaica rum. We have been advertising for years practically to get the English consumer, the better class consumer, who drinks Jamaica rum, but we have not succeeded as well as we have with that which is consumed which is a lower quality rum.

14817. Is Demerara rum drunk like liqueur brandy, neat, or is it diluted with water generally?—It is mostly diluted, certainly.

14818. What do you say as to the question of the age of the rum that you are dealing with? Is it better for keeping?—I think the time that is occupied in transit to this country is sufficient. It matures much more quickly than any other spirit.

14819. Would you, yourself, put any limit on the time that it is to remain in bond before use?—No, I would not.

14820. (*Dr. G. S. Buchanan.*) With regard to Jamaica rum the word "Jamaica" is used and "Jamaica rum" appears on the labels and bottles, and the spirit is described in the wine merchants' catalogues and so forth as Jamaica rum?—Yes.

14821. I gather you think it quite immaterial whether spirit so labelled does in fact come from Jamaica or is the product of Jamaica?—I will not say it is quite immaterial, because I should like to have it, unless there was some special known brand like our own where the word "Jamaica" or "Demerara" is never used, but its different qualities are known. If I were to purchase a bottle of rum I should prefer to know whether it was Jamaica or Demerara, because it would save me the trouble of rejecting it if it were Demerara and I did not like Demerara. That is the only point of view from which I should desire it.

14822. To that extent it is an advantage to the public?—Yes.

14823. I understand from you that Jamaica rum and Demerara rum are two different styles of rum?—Yes.

14824. Surely if a man wants to be able to get a Demerara rum he ought to be able to get a Demerara rum, and if he wants Jamaica rum he ought to be able to get Jamaica rum?—Certainly. I only speak as regards the value of rum to the individual.

14825. That is another story; but we were asking you whether any system of differentiation or marking would be in the interests of the consumer. If there are two different characters of rum and one man prefers one kind and another man prefers another kind, then that differentiation would be in the interests of the consumer?—Yes, certainly.

14826. Now with regard to definition. Do I understand that you would agree with the recommendation of the West Indian Committee that rum should be defined as the spirit produced by distillation from sugar-cane products in a sugar-cane producing country?—It is all the produce of sugar-cane whether it is from Demerara or Jamaica, I take it.

14827. That includes Jamaica rum or Demerara rum whether made in a pot still or patent still?—No, I should not think it was necessary to define it from that point of view.

14828. It would not be desirable to define rum in those terms?—No; I suggest that it should be defined as Jamaica or Demerara.

14829. We have done with the Jamaica and Demerara rums and we are now dealing with the spirit rum comprehensively. The West India Committee suggested that it should be defined in the way which I have spoken of. Do you see any objection to it being defined as a spirit produced by distillation from sugar-cane products in a sugar-cane producing country inclusive of Jamaica or Demerara?—There are very few countries outside.

14830. The point I want to ask you is this: Would you like to extend your definition to rum so that it allows you to add grain spirit?—Yes; I would say that it should be collective taking the whole. I would say that it should not be confined to one, either Jamaica or Demerara.

14831. Do you think it is legitimate and proper that they should sell under the name of "Rum" a mixture of rum, either Jamaica or Demerara, and grain spirit?—No, I should not.

14832. It is not your own practice?—No. I should certainly say that it should be rum from the West Indies and that it should not have any mixture of grain spirit in it.

14833. Do you deal at all in the rum that goes to Germany—the exported rum?—I do not deal in "German rum," that is, imitation rum. We do ship to Germany fine Jamaica rum, which is quite another thing.

14834. (*Dr. Adeney.*) Did I correctly understand you that for your blend of rum you do not use the patent still spirit either from molasses or grain?—Yes, I do. I use in one of my qualities mostly Demerara rum, and as Demerara rum is patent still I take it I use mostly that.

14835. I mean the ordinary molasses spirit of commerce?—No, I do not use that. It is pure rum, either patent or pot, that comes from the West Indies.

14836. You would not allow the use of the term "Rum" to a mixture of rum and grain spirit or molasses?—No, I would not.

14837. Have you any evidence that you could give us in support of your statement as to the value of rum as a food?—No, I cannot give you any.

14838. That is an opinion of yours?—Yes, it is my experience. I find that those people who use it (and the miners in the Northern parts and the Midlands of this country drink a good deal of it), use it because whiskey is too enervating. Rum is feeding. The sugar from which it is made is naturally feeding, and a man can drink a lot more rum than he can of any other spirit.

14839. But, as a matter of fact, is there any sugar in the rum itself? Apart from the use of the caramel is there any sugar in it?—I suppose there must be. There is a certain amount of sugar in it.

14840. But only added in the form of caramel to colour it?—Yes, that is all.

14841. I am afraid I do not quite understand your claim to rum as a food. I mean beyond the use of brandy or whiskey as a food?—The fact of it being produced from sugar is sufficient apart from its ethers. It is more feeding.

14842. In the process of production you have the sugar converted into alcohol and other things known as impurities?—Yes.

14843. So that you do not get sugar into rum from the distillation, but you only get it in very minute quantities as colouring matter?—Yes, that may be. It is very small, I admit. It is a very close point, but of the two I should say there was more feeding property in rum than there is in whiskey.

14844. It is new to the Commission that these spirits do act in the form of food except through the alcohols. Of course, the impurities are very minute?—That is so.

14845. I have just been informed that rum contains from 0·5 to 1 per cent. of sweetening matter. Is that correct as far as you know?—Yes.

14846-7. So that you are right in stating that there is some sugar in rum?—Yes.

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14848. (*Mr. Guillemard.*) I want to ask you one or two questions about the blending of rum. The old rums are blended with new rums to get a better flavour?—Yes.

14849. Is not that the main use of it?—Yes, to get different degrees naturally—with different ages.

14850. Is the blending operation carried on a good many times? Do you have a succession of blends?—Yes, you would have some very old rum which, I suppose, would be a blended rum, and naturally you would have to use that again.

14851. You would blend it again?—Yes.

14852. Do you blend yours outside bond or in bond?—Always in bond. We have no means of using anything but the West India rum in that way.

14853. You only blend for home consumption in this country?—And export. We blend very largely for export to Australia.

14854. I think I understood you to say in reply to a previous question that you do not blend any rum with plain British spirit?—No, never.

14855. They would not let you do it in bond for home consumption, but they would let you do it for export, but you do not do it?—That is so.

14856. What markets is your export trade done with?—Our export trade is done mainly with Australia—the Sydney markets.

14857. How does their marking regulation affect you? What declaration do you have to give as regards your blend?—The only declaration we have to give now is as to age, because they have an age limit there of two years.

14858. You simply call it rum?—Yes, we declare it to be pure West Indian rum.

14859. Have you any opinion whether, taking the trade generally, there is much mixture of plain British or foreign spirits with rum, outside bond?—I believe there is.

14860. Have you anything apart from a general sort of impression? Have you anything more definite that you could tell the Commission, because it would be very helpful if you could?—No, I have not, but I think it is general.

14861. For the home market?—Yes.

14862. We know it is done to a certain extent for the foreign market, but do you think it is for the home market?—I believe it is.

14863. Could you suggest any method of stopping it? Witnesses always say in that connection, "Oh, the Excise could do it," but there are certain difficulties about that. You have to check the thing first?—Yes.

14864. Have you any views on that?—It is a very difficult thing. If a man pays duty on a cask of rum or on a cask of spirit it goes into his cellar. Who is to say? How are you to know unless you make a house to house visit? It is very difficult.

14865. A good many witnesses have assumed that it would be a very easy job for the Revenue to do, Would you be glad to have the responsibility of looking after that as a practical man who knows how blending is carried on?—No. I should think it would be a very difficult matter.

14866. You would be sorry to undertake it?—I should.

14867. (*Dr. G. S. Buchanan.*) Is this mixing that you are thinking of probably taking place in the publican's cellars?—No, I should say not. I mean it is before that.

14868. It is on the premises of people who deal in spirits on a considerable scale?—Yes. Of course, that ebbs and flows. It does not apply to times when the price is very low. For instance, until this last 12 months I should say that it had not been used at all, but now that prices are ruling very high there is, of course, an inducement to cheapen the article by using a plain spirit.

14869. Do you consider it would make a good liquor?—I should say it would not make a bad liquor.

14870. The chief objection is on the ground of it not being what it is said to be?—Yes. I have no objection to plain spirit at all. I do not think there is any harm in it at all.

14871. (*Mr. Guillemard.*) You objected to the sale of the mixture as rum?—Yes.

14872. And you objected to the mixture of rum with grain or molasses spirit?—Yes.

14873. If the grain or molasses spirit was made in the West Indies—I do not know whether it is made in the West Indies, but if it came from the West Indies would you still object to its being mixed with rum and sold as rum?—No, I should not then.

14874. Do you know if there is any grain spirit made in the West Indies?—No, I do not think there is.

14875. It would be molasses spirit?—Yes.

14876. Supposing you imported molasses spirit from the West Indies (a witness yesterday took the line that if it could be made from molasses it was rather akin to rum) you would not in that case object to blending the same as rum?—No.

14877. But you do not actually do it?—No.

14878. (*Chairman.*) The existence of the importing of molasses to the West Indies is purely hypothetical. You do not think it takes place?—I do not think so.

The witness withdrew.

Mr. C. N. J. Moltzer.

Mr. C. N. J. Moltzer, called.

14879. (*Mr. Guillemard.*) You are, I believe, the principal partner in the firm of Messrs. Erven Lucas Bols, of Amsterdam, and 21, Mincing Lane, London?—Yes.

14880. You are a member of the Chamber of Commerce of Amsterdam?—Yes.

14881. What is the trade of your firm?—The distillation and fabrication of liqueurs, cordials, and also of gin, and besides that we are also blenders of gin.

14882. Over here or in Amsterdam?—In Amsterdam.

14883. You do not do any blending here?—No, never, we leave that to the English.

14884. Taking the liqueurs first, could you tell the Commission shortly the process of manufacture that is followed out in Amsterdam?—The liqueurs are made by infusion, distillation, and by the use of essences. There are some articles which cannot be distilled, or that we cannot obtain by distillation. You have, for instance, cherry brandy, peach bitters, and those kinds of things, all made by infusion. On the other hand, you have Anisette, Curaçao, and those kinds of things which are only to be had by distillation. As much as possible you must always avoid employing essences, because liqueurs made with essences can never be very good or nice liqueurs. Of course, we have to make some exceptions. We have to make an exception as to Crême de Menthe.

14885. Why is that?—Because we cannot get the plant Mentha Piperita, from which it is made, in Amsterdam, quite fresh, while it does not grow in Holland. It grows chiefly in England and America. From the leaves and the top of the plant there is made a very fine essence which is used for the distillation of Crême de Menthe. Chemical essences we never employ, and liqueurs made of chemical essences are always bad.

14886. The Commission would be very glad to have your opinion whether in the interests of the consumer in this country or in the interests of health, it would be desirable to require declarations as to the materials or the processes of manufacture or the preparation of the spirits that you have been telling us about?—I think it would be very useless.

14887. Why would that be?—In the first place it would be very difficult, and of no interest to the consumer.

14888. Do you mean that it would be very difficult to check?—Yes, it would be very difficult to check, because it is not to be supposed that any manufacturer would be willing to put an exact indication on the label of what his liqueur is made.

14889. Is the manufacture in Amsterdam conducted under the supervision of the Government, that is to say, under the supervision of the Revenue authorities, or do you do it in your own premises as you like?—We do it in our own premises as we like.

14890. With spirit that has paid duty?—Yes. We employ different kinds of spirits. For fine liqueurs we employ the fine French grape spirit, but for some kinds we have to employ another kind of spirit with less flavour and as neutral as possible.

14891. With regard to the age of the spirits you make, do you think it would be advisable that there should be a period fixed for their being kept in bond before they are consumed?—Do you mean for sweetened liqueurs?

14892. Yes?—Sweetened liqueurs are always imported in bottles, and therefore I consider it of no use to fix a period for bonding, the more so as all houses who have a reputation for their liqueurs do not put their liqueurs in circulation until they are of a certain age. We try to give them as much age as possible.

14893. What do you say as to the kind of age?—We never put them in circulation before they are six or seven months old. That is the shortest age. If possible, we keep them one year, but I do not say that it is always possible.

14894. Then with regard to gin, I see you say that you have noticed something in the evidence that you would like to make a statement about?—Yes, I refer to the evidence given by Mr. Clark. I see that Mr. Clark has said that gin does not improve by being kept in casks, and I cannot agree with him.

14895. You think that gin does improve in cask?—Yes. When he says that it is apt to deteriorate by being kept too long in cask, I think that that is not quite accurate.

14896. Do you think that it improves in cask?—Yes, certainly it does. Then with regard to the distillation he gave another opinion. The old Dutch genuine gin is not made by rectified spirit, but it is made by the simple distillation of malt juice with juniper berries. It is true that gin is made also by rectified spirit, but then it acquires quite another taste, and is not to be compared with the product of the old Dutch style of making.

14897. Is that the old Schiedam?—Yes. That is made only from the malt juice and distilled with juniper berries.

14898. Would not you say that old Schiedam is more of the nature of a liqueur?—No, certainly not. There are some old Genevas with a little sweetening in order to improve the taste and to make it more agreeable to the palate. You can have also old Hollands gin dry. You must understand the name old Hollands gin in two senses. In one way it means the old way of distillation, and on the other hand that it is kept in bond for a certain time, and certainly by keeping in bond the quality improves much. There are, in gin as well as in brandy, cognac, whiskey, and all other kinds of simple distillation, some impurities, and, by keeping in bond, those impurities are got rid of, but on the other hand the gin gets the flavour of the wood. The wood gives a certain tannin to the spirit, and that makes it better.

14899. All you have been saying applies to the old Hollands?—Yes.

14900. With regard to the ordinary gin, which is more like our gin that is made over here, you do not think that would improve much with age?—My opinion is that every spirit is improved by age without exception.

14901. Even when the gin is made from rectified spirit?—Rectified spirit by itself does not particularly improve in wood on account of its high alcohol degree, but as gin made from rectified spirit is reduced to a degree of about 12 under proof it will as well improve by keeping in cask.

14902. (*Mr. J. Y. Buchanan.*) I want to put to you a question about the best old Schiedam, as to which I think you say the old Dutch method of making it was in a mash with malt and fermenting that with juniper berries?—No. Formerly the raw product was only obtained by the fermentation of rye and grain; now some maize is also used. The juice obtained from this fermentation is distilled again, and the product from this second distillation is distilled with the juniper berries.

14903. There is first fermentation?—Yes.

14904. Then that is distilled, which gives you a raw spirit?—Yes, that gives you a raw spirit of a very low degree. Then it is distilled again, that is to say, this spirit of low degree giving a spirit of about 50 degrees, and this is the spirit which is distilled with the juniper berries.

14905. How long do you leave the juniper berries in the spirit before you distil it, generally?—Not a single moment before the distillation. You put it in the still and distillation is gone on with.

14906. And the boiling does the extraction?—Yes.

14907. Do you make the gin in that way from the juniper berries always just at one time of the year?—No, you can do it at any time of the year.

14908. Do berries preserve the flavour?—Yes. The dose of the juniper berry used is very different. It depends on the country where it is going to. There are some countries which ask for highly flavoured gins, and then you employ more berries than otherwise.

14909. Are the berries any better for your purpose in the autumn when they have ripened?—No, I do not think it would make any difference.

14910. You said for Crême de Menthe you do not use the herb yourself, because you get it better when it is distilled by the Americans at the time when it is collected?—Yes, because we could never have those plants fresh, and it would leave the great proportion of the essential flavour of the herb behind.

14911. You do not find that that is the case with the juniper berries?—No, it is not the same thing.

14912. Do you make these liqueurs—Curaçao and Kummel, the carraway seed, at any time of the year, or is it important that they should be fresh?—No, it does not matter.

14913. Oranges are used with Curaçao?—Yes, the green peels. We import them directly from Curaçao.

14914. And cherries?—We use them when they are ripe and fresh.

14915. You do not keep them?—No, we must employ the cherries and all kinds of fruit when they are at their best flavour.

14916. (*Dr. Adeney.*) When you state that you do not use chemical essences do I understand you to mean artificial essences?—Yes, artificial chemical essences was my meaning.

14917. You take every care not to use those?—Yes, we take every care we do not employ them.

14918. Why do you say that?—Because they are very cheap liqueurs that are made with the artificial chemical essences. I do not think they are unhealthy, but it is not a good stuff.

14919. They are of an inferior quality?—Yes.

14920. But they are not necessarily injurious to health?—No. I should like to be allowed to say something with regard to the gin distillation. I have seen it stated that gin was distilled not in a pot still but that it was rectified in a patent still. That is not quite accurate. The old style of distillation is always in a pot still.

14921. (*Dr. G. S. Buchanan.*) We had some evidence yesterday with regard to the system of labelling under the authority of the Municipality of Schiedam. Do you know that?—I do know it.

14922. Do you think that that affords any protection to the consumer over here?—I think not, and consider it is a great humbug.

14923. Could you develop that and let us know why?—Because it is quite impossible to make a control in the manufactories, and as far as I know no control with regard to the use of those labels has ever taken place.

14924. It is a system that has been set up merely by the Municipality and not by the Dutch Government?—It is not by the Government—absolutely not. It was only by the Municipality of Schiedam.

14925. At the same time, if this system or any other system distinguished between the kind of Schiedam that you have been telling us about that you regard

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as good, and the other kind of Hollands which you think is not as good, would that be desirable? Do I understand you to think there is a difference in the kind of Hollands which we get in this country, that on the one hand you have the Hollands which is made from maltwine in the way you have been telling us about, and on the other hand you have the Hollands that is made by flavouring with rectified spirit? Do you think there is a substantial difference between the two?—Certainly, principally in taste.

14926. Do you think it is in the interest of the consumer in this country that one kind of Hollands should be distinguished from another?—I do not think so, because it all depends on the taste. Perhaps you will prefer the gin made from rectified spirit, while one of your friends would prefer gin made in another way. I think it is only a question of taste.

14927. It was represented to us that Hollands prepared by your old methods was being practically extinguished in the market, because it could not compete in the matter of price with the rectified Hollands?—Certainly, Hollands prepared by the old method will cost much in fabrication, but on the other hand, as I stated before, the quality of the gin made of maltwine is much better than of that made of the rectified spirit.

14928. But you do not suggest any method by which the public should know whether it is one kind of spirit or another?—No.

14929. It must take its chance?—No, because quality is ruled by the price.

14930. You make cherry brandy?—Yes.

14931. Should cherry brandy be made with brandy?—Certainly, that is an infusion from cherries with brandy.

14932. The spirit should be brandy?—Yes, the brandy is put on the cherries, they remain there for some time, the brandy is flavoured by the juice of the cherries, and then it is employed for the liqueur.

14933. It is not distilled?—No, it would lose all its flavour by distilling.

14934. By brandy you mean a brandy that is derived from grape juice—a genuine brandy?—Yes, we employ spirit derived from grape juice as a rule and rectified grain spirit as an exception.

14935. You also use the rectified grain spirit?—Yes, we also employ it, but it all depends on the kind of cordial we make. There are some articles for which the grape spirit is too flavoured.

14936. Or too dear?—No, we do not consider the price, but when the flavour of the article which gives its name to the liqueur is very mild we cannot employ the wine spirit because the spirit is too flavoured.

14937. But you would call it cherry brandy all the same, whether you use grain spirit or brandy?—I cannot answer that question.

14938. I did not quite understand what you meant by keeping the spirit for at least six or seven months. Do you mean that the spirit before the essences are added is kept for six or seven months, or that you keep it six or seven months after it is made?—My meaning was, after the liqueur is made; when the liqueur is ready to be sold we leave it as long as possible in the vaults.

14939. Do you attach any importance to keeping the spirit and having an old spirit to distil?—That is of less importance, I think. The question there is, to use only a perfect quality.

14940. Do you make rum at all?—We buy the rum; we do not make rum.

14941. Have you any foreign market outside England?—We have in our West Indian rum.

14942. Do you trade with the West Indies?—Yes, we trade all over the world.

14943. Do I understand that the rum you send out is the same as the rum that you import?—We never send out rums. We have our home trade only in this article.

14944. And that is the special rum we have heard of that is very strong?—We buy rum here on the London market or in Amsterdam at a strength of about 31 over proof.

14945. It is not for sale by itself, but it is for sale after mixing with plainer spirit?—No, we sell also plain rum without any blending.

14946. (*Mr. J. Y. Buchanan.*) You sell rum, in point of fact, the same as you sell cherry brandy?—Yes, but only in small proportions, never for export, but only for the home trade.

14947. (*Dr. Adeney.*) Does the municipal control still exist at Schiedam?—I am not sure of that. I do not think so.

14948. I notice Mr. Clark, when giving evidence, threw doubt as to whether it really did exist now?—That may be.

14949. (*Mr. J. Y. Buchanan.*) It is not effective in any case?—I do not think it is effective. That is my opinion. I only speak for myself.

14950. (*Dr. Adeney.*) You do not know yourself whether it is still in existence or not?—No.

14951. Do you seek to protect your own produce by means of labels?—Certainly. Our labels are registered.

14952. And you find that a sufficient protection for your produce?—Well, it might be better.

14953. (*Mr. J. Y. Buchanan.*) Are they pirated?—Yes. I might say that I found in England the most aid possible when two years ago I had to fight against that.

14954. That is when you were prosecuting with regard to the label?—Yes, and then I found here great assistance, but I cannot say that I found this assistance in other countries. I am very happy to say that here.

14955. (*Dr. Adeney.*) Are you able to identify your own produce with certainty in case of suspected fraud?—I do not understand you quite.

14956. If you happen to come across a bottle that was said to contain your own produce, with your label on, and the contents were not your produce, could you with certainty detect that?—I think so from the taste and the nose.

14957. (*Dr. G. S. Buchanan.*) Even if it was half your produce and half a diluting agent?—Then it would be very difficult.

14958. Do you know if it was the practice in Holland a long time ago to use brandy in the manufacture of Geneva?—No.

14959. I mean brandy in place of maltwine?—No, I never heard of it.

14960. I have here a book called "The Complete Distiller" of 1757 that Sir William Boord sent me after some of the questions that were put to him the other day. After stating what the ordinary constituents of Geneva were in those days, it says that "The ingredients used by the Dutch are, however, the same as those given in the first recipe of this chapter"—that is to say, the juniper berries and proof spirit, and so forth—"only instead of malt spirit they used French brandy"?—I have never heard of that. I think the price would be much too high. It would be too expensive to employ French brandy.

14961. It is 150 years ago. It is merely put to you historically?—At that time, perhaps, the French brandy was cheaper.

14962. (*Chairman.*) And it was probably smuggled?—I have seen it stated here that old Geneva is no longer gin. Against that I consider that old Geneva remains gin.

14963. (*Dr. G. S. Buchanan.*) Can you tell us what is the practice with regard to the sale of absinthe in different countries? In what countries is it prohibited?—In Switzerland and in Belgium. I am quite certain of those two countries, but not of others. In Holland it is very seldom used.

14964. Is the amount of the essential substance of absinthe fixed in any way? Is there any sort of standard for the moment?—I do not think so, but as I have never occupied myself with the distillation of absinthe I cannot give correct evidence.

14965. (*Mr. J. Y. Buchanan.*) Is it made in Holland at all?—Never.

14966. Where is it made?—It is made in France, and it is made in Switzerland.

14967. They supply the market?—Yes.

14968. (*Dr. Adeney.*) Is it still made in Switzerland?—Yes, but its use is prohibited in Switzerland.

14969. They do make it?—Yes, for export, I think.

The witness withdrew.

Mr. THOMAS H. BOARD, called.

Mr. T. H. Board.

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14970. (*Mr. J. Y. Buchanan.*) You are a director of Messrs. Joseph and John Vickers & Co., Limited?—Yes.

14971. Is that business carried on in London?—Yes, at Fulham. I am also director of the Bristol Distillery Company, at Bristol. My two businesses are connected, but are different companies.

14972. You wish to give us your opinion with regard to the restriction of materials in making gin? Could you give us that?—I do not think any restrictions are necessary as to the materials for making gin. I think, taking it all round, at the present minute gin is the purest spirit that is made. I think that gin should be made of rectified corn spirit, and should be flavoured with juniper berries and other ingredients that are distilled in the still.

14973. The corn spirit distilled with the juniper berries?—The rectified spirit should be used, but not essences.

14974. Would you call an essence the making of an infusion, as it were, of the juniper berries with spirit of considerable strength, and diluting that with other spirit?—Yes. I should not call it the proper way to make gin.

14975. You consider gin should always be distilled with the berries?—That is so.

14976. You think it would be impossible to supervise the ingredients used in gin so as to have any effect?—To the consumer?

14977. Yes?—Yes, unless it was manufactured in bond it would be absolutely impossible.

14978. Do you think that any declarations should be made or required as to the materials used?—I do not think it would be effective unless it could be checked. I do not think, whatever it was made from, that it could be discovered by chemical means.

14979. Do you think any restriction should be made as to the age it should be kept before going to the consumer?—I think being made of rectified spirit it certainly should be used new. Gin has always been recognised as being a spirit that is quite water white, and if it were kept in bond it would lose its character and become discoloured.

14980. If you make no restriction in that respect with regard to home gin you would not expect any to be made with regard to foreign gin?—I do not know sufficiently how foreign gin is made to answer that question, but I fancy it is not so highly rectified as English gin.

14981. Your opinion is that rectified grain spirit should be used for making gin?—I think so.

14982. Is that rectified so far that there are no bye-products left in it?—No, certainly not. I want to say that I quite agree with the evidence that Mr. Nicholson gave the other day with reference to that. My company in Bristol for years have manufactured the spirit for it, and, in fact, we did before 1700, and we have always considered that spirit that is too highly rectified is not suitable for making gin, if so, the Continental spirit which comes over here which is highly rectified would be as good, which is not the fact.

14983. I suppose that has a good deal to do with the reason?—I think the English is better because it is the style that is accepted, and which has always been made.

14984. You think that undoubtedly it is preferable?—Yes, in our eyes the highly rectified spirit would not make good gin.

14985. When the alcohol is sufficiently rectified to get rid of everything, it does not matter what it is made from?—That is so.

14986. But you prefer to keep a little of the origin of the alcohol in it in the form of grain spirit?—I certainly think that anybody who is most particular as to the quality of the gin, as all the London rectifiers are, would think that the quality would suffer if absolutely pure spirit were used.

14987. (*Dr. G. S. Buchanan.*) Do you think that plain spirit, German spirit, potato spirit, suitably flavoured, should be sold as gin?—I do not think you could prevent it being sold as gin. I do not think it gives as good a quality gin.

14988. I was not asking you whether you could prevent it being produced. Do you think it is desirable? Do you think it is fair to call it gin?—I think it is a gin of a kind—of a quality.

14989. Although you say you consider that gin should be made from rectified grain spirit you would not propose that it should in any official definition, or anything of that sort, be restricted in that way?—I do not see how you can do so, because history shows that in 1810—and you had evidence of that the other day—even molasses was used in making gin. I think it most undesirable that anything of that sort should be used, but it seems to me that it is rather late to make the definition now.

14990. The controversy whether juniper berries should be put in the pot still, or whether there should be added a flavour of juniper berries afterwards is a very old one, is it not?—Yes, I think so. I have heard a great deal of its being used, but I do not know that it is used to any great extent.

14991. In this book that I was reading from just now, "The Complete System of Distillation," written by Cooper in 1757, it is stated: "There was formerly kept in the apothecary's shop a distilled spirituous water of juniper; but the vulgar being fond of it as a dram the distillers supplanted the apothecaries and sold it under the name of Geneva. The common sort, however, is not made from juniper berries, as it ought to be, but from oil of turpentine." They there give the method and that goes on to this day practically?—Yes.

14992. (*Mr. Guillemard.*) I see you start by saying you do not consider it is possible to put any restrictions on the ingredients used, but you qualify that later, because you do make the restriction that it should be grain spirit?—I think it is desirable in the interests of the quality that it should be grain spirit.

14993. You would not go so far as to say that anything not made with grain spirit should not have the use of the name?—I think that would be a very desirable thing to do, but how are you to make the restrictions unless you can check it all the way through? That can only be done to my mind if the gin is only made in bond, which is out of the question.

14994. Evidently it is your view that you desire to restrict it to grain?—Yes, because it makes the best quality. I should be very sorry to use molasses spirit, for instance, in making our gin. I do not think it is used to any extent.

14995. Do you think it is possible that it will be used? The method of distillation keeps changing?—Yes, but the gin distillers are sufficiently proud of their quality to see that they do not use it. The supply and demand would meet it.

14996. That was not quite my point. Is it not possible that with some of the alterations in the plant, and the alterations of the methods, you might get a spirit from things other than grain spirit that would be an equally good foundation for gin?—It is possible.

14997. But you do not think it is likely?—I do not think it is likely.

14998. (*Dr. G. S. Buchanan.*) Is it at your distillery that there is a pot still?—Yes.

14999. Is it used at all?—Yes, for making pot still whiskey.

15000. Is it called whiskey?—Yes, Bristol whiskey.

15001. Not whiskey by itself?—We sell a blend of our pot still and patent still as "Bristol Irish whiskey." It is an Irish type.

15002. Is it labelled as such?—We sell it wholesale in bulk.

15003. And it is sold as Irish?—Yes, it is blended with Irish, no doubt.

15004. (*Mr. Guillemard.*) "Irish" to you in that connection only connotes the quality, and it is not used geographically?—That is so.

15005. Is that the interpretation you put on Irish whiskey generally? Does it, to your mind, mean that

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it is necessarily made in Ireland, or that it is whiskey of a particular sort that is called Irish?—It is a special kind that has come to be regarded as Irish. As a matter of fact we have no doubt that the "Bristol Irish whiskey" that we sell wholesale is blended with another Irish pot still whiskey.

15006. Taking the views of people in the trade generally, what do you think would be the general understanding of "Irish" or "Scotch"?—Do you mean the view of the public?

15007. No, I want to get an expert opinion. What would be the understanding of people who are engaged in the trade? Would the bulk of them think that it meant whiskey made in Ireland or Scotland, or would the bulk of them think that it related to the nature of the spirit?—That is rather a difficult question. It depends on the class of person you are referring to to a great extent.

15008. What I have in my mind is this. The Commission have been pressed to make a definition, and a good many people have pressed the Commission to make it by reference to the geography?—Quite so.

15009. A large number of well-informed people might regard that as an undesirable thing?—I should say the trade and the public have not regarded it geographically.

15010. Then it would come more or less as a surprise to you if the Commission did recommend that Irish or Scotch whiskey should be defined by reference to the place of production?—I think it is contrary to the past practice.

15011. Really well-informed people in the trade would be surprised, and they would say: "This is not our idea of the past"?—Our distillery in Bristol is one of the oldest in the kingdom, I should say. I cannot say how far it goes back, but for a great number of years, and until recently, we have always sold a great quantity of our whiskey in Scotland and Ireland for blending.

15012. But have you sold it as "Irish" or "Scotch"?—No, we have sold it as "Grain" for blending purposes, and that has been blended with Scotch or Irish pot still, and sold as blended Irish whiskey, or blended Scotch whiskey.

15013. (*Dr. G. S. Buchanan.*) Are you speaking of your pot still?—No, I am not talking of our pot still, but I am speaking of our grain spirit.

15014. (*Dr. Adeney.*) All your remarks are with reference to patent spirit?—Yes.

15015. (*Mr. Guillemard.*) But as to the product of your pot still, your firm has for a very long time sold that as "Irish Whiskey" made in Bristol?—Yes.

15016. For a time longer than you can say?—Yes. It was revived about 1890, I think, but we made pot still for years before.

15017. People have not been complaining of that, and people have not come along saying, "This is not made in Ireland, and you have no business to call this Irish whiskey?" They have not done that?—No.

15018. You sell it to blenders?—Yes.

15019. And not direct to consumers?—No, it would go to people who would blend it with something else, because no self whiskey would meet the public palate.

15020. (*Dr. Adeney.*) What are the constituents of your mash for your pot still product? What do you put in the grist?—It varies, but we generally use maize, malted barley, and oats.

15021. You always use malt as one of the constituents?—Yes.

15022. How many distillations have you for your pot still product?—Three.

15023. That is the reason why you call it Irish?—We call it Irish because it has an Irish flavour. There is no peaty flavour about it.

15024. (*Chairman.*) Do you call it "Irish Whiskey" because of the method, or because of the ingredients?—Because of the method.

15025. (*Dr. Adeney.*) You do not find the maize gives it an unpleasant flavour?—I do not think our customers find it so.

15026. You have never had any complaint?—No. It is a very good whiskey, I think.

15027. Do you know from your own experience whether it has a similar taste to the characteristic Irish flavour?—You would not know the difference.

The witness withdrew.

(*Chairman.*) We will now adjourn. This is the last sitting of the Commission during the present Session. The Commission have now sat 28 full days, they have examined 98 witnesses, and they have presented an Interim Report which, I trust, will be of use to the public. As to the next sitting of the Commission, that is uncertain, but full notice will be given to the Press and to the public as to when that renewed sitting is to take place.

(Adjourned *sine die.*)

TWENTY-NINTH DAY.

Monday, 8th March, 1909.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mons. E. Martell.

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Monsieur EDWARD MARTELL, called.

15028. (*Chairman.*) Are you the head of the firm of Messrs. Martell and Co., of Cognac?—Yes, I am the head of the firm.

15029. What is the name of your firm?—Martell and Co.

15030. How many years have you been connected

with the firm?—I have been connected with the firm for the last 55 years.

15031. Will you kindly state generally the business you carry on?—The business we are carrying on is what you call an export trade with the British Empire, and not only with the British Empire but with North and South America. That is, I may say, our largest business, although we are shippers of brandy to small places in Europe, but not on a large scale, and it is only with Greater Britain and the States of America that we are doing what I call a large business.

15032. I hope you find Great Britain a good customer?—I think it is the best customer.

15033. That from what you say yourself is a very extensive business?—It is a good business, no doubt.

15034. What is the commodity that you deal in—is it only brandy?—We ship nothing but brandy.

15035. Under what name do you sell your brandy?—"J. and F. Martell, Cognac." The founder of the house was Jean Martell, and he was succeeded by his two sons, John and Frederick Martell. There was a law which was passed in France in 1818 under which, as there was no John and no Frederick Martell existing, we were obliged to alter our firm, and then we carried on our business under the firm name of Martell and Co., but the trade mark was J. and F. Martell.

15036. It is a very extensive business in Cognac brandy?—Yes, nothing but Cognac brandy.

15037. Is Cognac brandy created and manufactured in the Charente district?—It is manufactured in the Charente district. There are two departments, the Charente and Charente Inférieure, which are making Cognac brandy.

15038. Do not answer the question unless you like, but will you tell me what is Cognac brandy—what are the materials employed in its creation, and, secondly, what is the process?—The creation is very simple; it is nothing but wine grapes which are gathered in our country, and after they have been gathered they are taken away in a cart to what is called the wine press; the grapes are pressed, and after being pressed the stalks and the skins of the grapes are also pressed to get all the alcohol out of the grape, and it is then put into casks and the fermentation takes place. A fortnight or three weeks after the fermentation is over it is ready for distillation.

15039. According to your statement it would be from the grapes, and from the grapes only, that purity would be found—nothing else?—Nothing else. It is nothing but grapes.

15040. Is that your view of what brandy ought to be?—Of course. If there was any other thing put into grapes it would be a bad thing, because we consider ourselves and all the Cognac shippers are shipping nothing but Cognac brandy made out of grapes gathered in the country.

15041. I suppose you are not speaking of any other district but your own?—Only our own district.

15042. As far as you know is the production purely from the juice of the grapes in that district?—Yes, it is solely the production of the grapes and nothing else.

15043. Have you ever heard or known of any adulteration taking place?—No adulteration has taken place. That is quite another thing. There is no doubt that there are shippers who are obliged to ship what I call cheaper brandy, which can be mixed with another wine spirit, but generally I must say with regard to the stock now in Cognac—that is, the Cognac houses—they are shipping pure brandy.

15044. But of whom are you speaking when you say there are shippers?—There are what you may call two or three qualities of brandy. If you want to have a cheap brandy, according to the French regulations, you may mix it with other alcohol—the wine spirit of the South of France, for instance.

15045. I will ask you as to the French law directly; I want to know the fact at present. In your trade and in your firm, I suppose, you sell high-priced brandy?—High-priced brandy and nothing but pure grape.

15046. And now you are speaking of your knowledge of what occurs with others?—Yes.

15047. What is it that, apart from the pure juice of the grape, goes into the other brandies?—Nothing but what you call the wine spirit, which is made in the South of France.

15048. Is that an inferior quality of wine spirit, or is that simply wine spirit mixed with the pure juice of the grape?—It is only wine spirit which is distilled first, and after the distillation it is mixed with the Cognac brandy.

15049. What is this wine spirit?—It is made out of grapes, but grapes which are gathered in the South of France. In the South of France there are very large vineyards.

15050. Is that an inferior grape for making wine?—It is not an inferior grape, but it is a grape which has not the nature of the grape from which Cognac brandy is made.

15050*a*. In what sense does it differ from the Cognac brandy grape?—It does not differ at all, but as soon as it is distilled it is not like a pure Cognac brandy.

15051. Why is it inferior?—It is inferior because it is grown in a part of France where there is what we call "terroir" (*i.e.*, earthy flavour); that is the only thing.

15052. It is pure grape but a different kind of grape?—That is so.

15053. Would such an inferior brandy as it becomes, according to you, be in any way injurious to health?—Oh, not in the least injurious to health.

15054. Then it would be wrong to call that adulterated?—It is not adulterated. It is what you call an inferior brandy and nothing else.

15055. The same would exist in many wines—you get higher class wines?—That is exactly the thing. In the case of wines there are different grades and different classes of wines, not only in the Bordeaux district but also in the Burgundy district.

15056. Apart from what you have explained, that you have a second class and an inferior class of brandy, do you know of any adulteration that goes on in respect of brandy or any interference with its purity before it is sent to this country?—No, I cannot say that I do.

15057. So far as you know?—So far as I know.

15058. You confine your belief simply to a second class of brandy as compared with the Cognac?—Yes.

15059. I know you are only speaking from outside knowledge, but where does this, which we call the second-class brandy, go to? Is it sold largely in France?—It is sold very largely in France. There is a very large trade for that brandy, and, of course, that brandy is mixed with the Cognac brandy.

15060. Supposing you go into a good restaurant and ask for a glass of brandy, or as the term is sometimes used, "fine champagne," what brandy would you get—the good or the second class?—In the first-class restaurants you could get what you call "genuine fine champagne," but in the smaller restaurants they call "fine champagne" what is not fine champagne. That is what takes place.

15061. Is there any great difference in price between your first-class Cognac and what we call the second-class brandy?—Yes, there is a great difference, no doubt.

15062. In the wholesale price?—Yes.

15063. I gather from the description you have given of the matter that the retail price would probably be the same?—The retail price is nearly about the same. That depends entirely on the seller. I cannot tell you exactly what price they are asking for that brandy.

15064. Who gets the benefit of that lower wholesale price and the retail level price?—Both get the benefit of it.

15065. Who?—The wholesaler as well as the retailer.

15066. I should have thought probably the retailer would get the benefit of it?—Yes, but I cannot tell you exactly the difference.

15067. If they get the better of it, do you think the consumer gets any the worse of it?—If the consumer goes to good restaurants or to good bars he gets what I call a decent glass of brandy.

15068. Does he know the difference?—No. Consumers sometimes are not very good judges.

15069. Do you know anything of any manufacture of brandy in which grain spirit is mixed up with the wine juice?—No, I cannot tell you that.

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15070. I am sure you will not be uncharitable, but have you heard that such a thing does take place?—It has taken place at one time, but since we have our new regulations I do not think it is practised now. It may be practised on a very small scale, but I cannot tell you whether it is practised or not.

15071. At any rate, it is a practice that is entirely unknown to your business?—Oh, quite.

15072. Is it unknown in any fair trading?—Yes.

15073. I think now I will ask you what are the steps of distillation. What is your distilling process? What still do you use?—The stills we are using are the pot stills. I think we have photographs here of our pot stills.

15074. Do you know enough to say that your stills are pretty nearly the same as the pot stills used for our whiskey?—Our stills have nothing to do with the patent stills.

15075. Pot stills, not patent stills?—I do not know exactly what are used here as whiskey stills.

15076. We use in this country the pot still and the patent still. Take first the pot still. They are very old stills and are not patented. Are they pretty nearly the same as you use for distilling your brandy?—Yes, it is the same principle.

15077. Is *this* a representation of your pot stills? (*Producing photographs.*)—Yes, that is an exact representation of our pot stills.

15078. We may take it that they are really the same as the whiskey pot stills only a little smaller?—I have not seen the whiskey pot stills.

15079. You know nothing of any patent still?—No.

15080. What is your process if you carry it through after you have got your pure juice of the grape; what course is pursued in relation to it?—The wine spirit is put into those pot stills. The brandy gets out through a worm, and that worm is surrounded by cold water. If you want technical terms, I think you will get them better from my partner, Mr. Harrison, because I am not an Englishman—I am a Frenchman. Mr. Harrison has been for the last 40 years in my business, and he is at the head of all our distilleries, and he will be able to give you all the technical explanations that you may require.

15081. If that is so, perhaps you would prefer our asking Mr. Harrison as to the details of the distillation?—Yes, that would be better.

15082. How far do your laws interfere with you in the production and also the distribution of your manufacture?—They do not interfere with us, but the only thing is, we are entirely in the hands and under the survey of what you call the Excise officers, and therefore you understand very well that the wine we buy and which comes to our distilleries is under the survey and the watch of the Excise officers.

15083. For what purpose do the Excise officers watch? Is it for purity?—Yes, for purity, because if we were taking into our distillery alcohol or any other spirit you please, the brandies that we are distilling could not leave our premises with the *certificat d'origine*.

15084. Do the Excise officers interfere by entry?—They can come whenever they like.

15085. And see your process?—And see our process.

15086. The brandy has gone through the distillery, and, I suppose, as a rule, it is sent out in cask?—Yes, in cask to our warehouse.

15087. Do the Excise officers interfere again?—Yes, they have always the liberty to come into our warehouses whenever they like.

15088. What label do they give you?—We have books and in those books they put down the quantities we have in our warehouses, and every month or five weeks they come into our warehouses to see what has been entered and what has been drawn out.

15089. Do they give what we should call a certificate of purity, or anything of that kind?—We get a certificate of purity, no doubt, because all the brandies which we are receiving from our distilleries leave our distilleries with the certificate of origin.

15090. Would that certificate show first that this was pure Cognac?—Yes, and we can swear it is pure Cognac, because all the wines we have received are known by those Excise officers, and, of course, after distillation they come to our warehouses.

15091. With that certificate your cask of Cognac starts on its journey?—Yes.

15092. Supposing it comes to England. Is it subjected to any other test or any other enquiry till it comes here?—No; but the only test you have is when it is leaving our warehouse, and is put on board the steamer, the certificate follows it.

15093. Where is that looked at? Is it looked at by the merchant when it arrives here in England, or by our Custom House officers?—That is looked at by the Custom House officers.

15094. You have no objection to that certificate being looked at?—No, no objection whatever. But, of course, I think they do not want that. They can trust all the shippers who are shipping brandy to this country, and, therefore, I think it is no use having the brandy accompanied with the certificate.

15095. And, of course, the merchant, when it arrives here, has the power of testing whether you have fulfilled your contract?—Yes. All our brandies are shipped on sample, and if the brandy which has been shipped corresponds with the sample the buyer has nothing to say.

15096. Can you suggest any certificate or process other than takes place now to ensure the delivery of pure brandy?—No, I do not think I can.

15097. Would it be possible for the Custom House officers here to apply any test on the spot?—I think it would be quite useless. It would give them a great deal of trouble, and I think they would be quite wrong to do so.

15098. And it would be ineffective?—It would be ineffective—that is the word.

15099. (*Dr. G. S. Buchanan.*) I see from your *précis* that you consider that the English word "brandy" may be taken as the equivalent of eau-de-vie, according to the French law?—Yes, according to the French law.

15100. But with regard to the additions of grain spirit and beet spirit those are allowed, are they not, by the French law as eau-de-vie?—Yes, as eau-de-vie I am sorry to say—but not as Cognac.

15101. Perhaps it would be best to take the series of definitions which you have kindly put down for us in your *précis* of evidence. You tell us that brandy, taking the word in a general sense, should be a spirit distilled from a wine produced from grapes?—Yes.

15102. And that Cognac brandy should be a spirit distilled from grape wine produced in the two departments of the Charente?—Yes.

15103. Do you think that it would be advisable that Cognac brandy mixed with alcohol, such as wine alcohol, with other brandies not from the Charente, or with beet spirit, should be sold as Cognac?—It would be much better if it could not be sold as Cognac, but it is rather difficult.

15104. You mentioned that if in France you ask for fine champagne you may, or may not, get fine champagne which is a Charente product?—Yes, I am sorry to say so. Very often what is sold under the name of "fine champagne" is not fine champagne. But that is a question for the French trade, because the term "fine champagne" is not used in England or abroad. That term has been used for many years. In a restaurant or a café they will say, "Give me a glass of fine champagne," but, of course, in this country you have also the champagne wines, and, therefore you seldom use the term "fine champagne" for brandy in England.

15105. (*Chairman.*) I think you may say never?—Never—that is what I think.

15106. (*Dr. G. S. Buchanan.*) Is a difference made between fine champagne and "fine"—"fine" may mean anything?—Yes.

15107. Does the term "fine champagne" merely apply to age?—Yes, we have called it ourselves "fine champagne," but the fine champagne which is sold in all restaurants and cafés would have a certain age.

15108. (*Chairman.*) It is old?—It is old.

15109. (*Dr. G. S. Buchanan.*) I asked you that question because I understood that owing to recent

section by the Legislature in France a more exact meaning was being attached to those words. We had experience ourselves in Paris of asking for "Cognac" in an important restaurant, and being told they kept no Cognac?—They kept no Cognac—they kept nothing but "fine."

15110. That refusal would not have been likely a few years ago?—No. "Fine" was belonging to the Charente district, and when you said "fine" it meant a glass of "fine champagne." But "fine" is considered a generic name instead of only belonging to the district of Charente.

15111. But my point was that some difference is being made in France with regard to these names, and the fact that you can ask in Paris for Cognac at important restaurants and they say they cannot supply it, that they have not got it, is some evidence of that?—Yes, but they do not wish to sell Cognac; they only sell "fine" because they get a greater profit. They sell what they like.

15112. (*Dr. Adeney.*) It may be wine spirit mixed with grain spirit?—It may be. I cannot tell you.

15113. There is nothing in the law to prevent it?—No.

15114. (*Dr. G. S. Buchanan.*) We had another experience in another restaurant where we asked for Cognac and were brought the bottle, which showed by the label that it was Cognac?—Yes.

15115. That is a proceeding you would approve of?—No doubt. But they sometimes fill our bottles with spurious stuff.

15116. Have you taken any action with regard to that?—Oh, yes, many times.

15117. In this country?—The law is for us in this country, and when you find a man filling up our bottles with spurious stuff he goes before a police court and is condemned to a heavy fine, and sometimes five or six days' imprisonment.

15118. I think you wish to give us your opinion with regard to the age of brandy. You do not think there is any prejudice in selling young brandy?—No, no prejudice whatever. Young brandy is a very, very wholesome spirit.

15119. (*Dr. Adeney.*) What advantage do you think age imparts to Cognac that the spirit does not possess when freshly prepared?—I do not not follow the question.

15120. What advantage does age impart to your spirit that the spirit does not possess when it is freshly prepared?—In ageing the brandy is more delicate and softer. There is no doubt about that. It is a softer and more delicate spirit when it gets aged.

15121. It has a more pleasant flavour?—It has a more pleasant flavour, but when it is new it is a wholesome spirit, the same as old brandy. It has got the bouquet but it is not so soft or mellow.

15122. Does ageing impart any special medicinal property to the brandy?—No, not at all. It is only put in very good casks, as the Commissioners have seen in Cognac, and you leave your brandy there in that oak wood, and keeping it in those casks it is improving in age after a few years.

15123. And the advantage is simply that of flavour?—Yes.

15124. I think the other questions I want to ask you are technical, so perhaps you would prefer my putting those to Mr. Harrison?—Yes. I am a Frenchman, and Mr. Harrison would explain the thing much better than I could explain it myself.

15125. (*Mr. J. Y. Buchanan.*) I had not the pleasure of accompanying the Commission on their visit to France, and, therefore, I would like to ask you a question or two. I suppose the brandies are sold on sample, are they not?—Yes. At one time they were not sold on sample, but in the last fifteen or twenty years they are always sold on sample.

15126. I remember long ago one heard of vintage brandies?—Yes. When we have a good crop then we call it 1901, or 1902, or 1903, and so on.

15127. You still keep to that?—Yes.

15128. It is not very often heard of now?—No, because I am sorry to say the Cognac business has very much fallen off in England. It is not so much brandy now as whiskey.

15129. But at present if an order came from England for brandy is it usually accompanied by a sample?—Yes, very often; but, of course, we send the sample first, and if they adopt the sample we ship the goods. They have the sample before them, and they can judge whether it is the same quality.

15130. Is that made up from different years, according to what the taste is?—Yes, but when we are shipping what we call new brandy it is brandy which has been distilled five or six months before it is shipped.

15131. In the case of Spanish wines at Cadiz, if you want a sherry you either send or get a sample, and that sample is made up in the bodega from casks of various ages?—It is not the same thing with us. When we have a vintage it is the vintage of the year.

15132. But if it is a sample of Cognac then you make it, if necessary, from different ages?—If they ask us for an old brandy then we do as they do in Spain, we send a sample, and if the sample is adopted we ship according to the sample.

15133. I wanted to bring it out simply in this way, that brandy does not now acquire a vintage?—It is a vintage in bulk but not in cases.

15134. In your bodegas you keep the brandy of the year separate?—Quite separate.

15135. Not like the Spaniards, where they keep it according to the quality?—Oh, no. There is no need. What we are shipping is the new brandy. Formerly it was kept in the docks here for two or three years before being consumed. But, of course, if the brandy was kept till it was old by us, all that the importing merchant could swear to was that the brandy was to their taste. Whereas, if it was imported new it went into the docks, and they took it out of the docks, say, in four or five years, and they could swear it was four or five years old.

15136. But that is not done now?—It is done now but on a very small scale.

15137. (*Dr. Cushny.*) How much brandy is drunk new?—When the brandy is a year or two years old it can be drunk very well new, and, not only that, but in our place in Cognac there are many farmers who bring with them, when they come to town, a small sample of brandy, and they will put into their coffee a little touch of that new brandy.

15138. It is not drunk by the general population new?—You can drink brandies which are new and have been kept for five or six or seven months. It is distilled in November, and it is only consumed in the middle of the next year.

15139. (*Chairman.*) The Commissioners are very much obliged to you for your evidence, and we are sorry you should have had to come such a long way.—It has been a pleasure.

The witness withdrew.

MR. RICHARD WILLIAM HARRISON, called.

15140. (*Dr. Adeney.*) Will you give us a little more fully than Mr. Martell did the process by which you obtain your brandy?—The wine is put into a still at its natural strength, which varies according to the different years. The wine may be from 7 or 8 or 9 degrees—it varies according to the different years.

15141. What are the limits?—One cannot say. The average varies from 7 to 10 in ordinary years.

15142. This wine is distilled in a very simple form of pot still?—Yes.

15143. The simplest form that is known?—It is quite the old original form of pot still. It is generally used in the Charente district.

15144. What charge does the still hold?—The still varies in size. The ordinary sizes run from six to nine hectolitres—that is the average size of a pot still.

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15145. Do you know the equivalent of that in English measure?—The hectolitre is the equivalent of 22 gallons, that makes 130 to 150 gallons.

15146. How many distillations have you in the process?—There are two distillations in the fabrication of brandy. The wine is put into the still, and that would make what you call a "mash"—we call it a "brouillis." The "brouillis" is the first process. You distil your wine until there is no longer any alcohol remaining in the wine, and as a rule you draw out about one third of the product. Then the "brouillis" is put back into the still to make the real brandy, and then, in the process of distillation, five or six litres are drawn off of the "tête," or what comes through first, because they may have a slight taste of copper—they are put aside, and then you draw off your brandy. The remainder is the feints, which with the tête go back into the wine for the next brouillis. You wish to distil your brandy at a given strength, according to the growths.

15147. You draw off the brandy?—You draw off the brandy.

15148. What strength do you run it at?—The tête varies according to the strength of the wine that has made your "brouillis." The tête varies from 72 to 75 French degrees. You have to distil with care, and distil slowly, if you wish all the ethers to pass and your distillation to be properly made. It is a process that must not be too much hurried. You, yourself, saw the process. We watch when the spirit is running so as to follow the strength as it is distilling, and when you have once made your first lot with a given wine you know at what strength you would have to stop running for your good brandy, and then you continue to run the brandy until you get to about that strength. You turn the tap and let it run off into another receptacle, and test the brandy that you have made till you get the required strength of 67, 68, 69, or 70 French degrees, as you wish to have it made, according to champagne or other growths.

15149. Can you give us the equivalent of that in English measure?—I have not the tables before me, but the English proof strength is 56 or 57, and the French proof strength is 100°.

15150. You have a third fraction, I suppose?—The third fraction is, I believe, what you call in whiskey "feints"; we call it "seconde," and that "seconde" is mixed with the tête that you have already drawn off. They are put together and go in with the wine to make the next "brouillis."

15151. Do you ever rectify that "seconde" separately?—No, we always put it back with the wine. Our experience always in distilling is that when once the process has taken its regular course and you have the seconde with your wine, the brandy produced is mellower and softer than the first cask that you have distilled when there has been no seconde with it.

15152. I suppose at the end of the season it is kept over to the next season?—There is only one "seconde" left from the last distillation, which is taken into account by the Excise.

15153. What is done to that?—It is kept till the next season, but it is a very small quantity. We endeavour to have only one cask remaining at the end of the season in each distillery.

15154. Has the use of the seconde or tête an important effect on your distillation?—There is a great deal of value in the seconde, because in distilling your good brandy, what is remaining in the still is at 55 or 56—it is nearly your Sykes' proof; so, of course, you have to get all the brandy alcohol from that, and you continue distilling from your seconde until you get to zero, and there is no longer any spirit remaining in the still.

15155. Do you attach value simply to the fact that it contains alcohol, or has it any flavouring principles?—There is a great deal of the ethers and the different qualities of brandy in that seconde.

15156. (*Dr. G. S. Buchanan.*) I asked your distiller whether he could produce brandy, what he would regard as brandy, if he had no seconde from a previous distillation, and he said "No." He said if he was beginning at a new season he would first distil till he got tête and seconde, and nothing else, and then he would go on?—If he told you that I think he misunderstood your question, because really and truly, if what is remaining over is a residue of woodland brandy from any previous years, we should not think of putting that seconde into a champagne brandy. We should keep it until we were distilling a champagne or a petite champagne, according to what we had remaining.

15157. (*Dr. Adeney.*) Is it possible to use the same form of still that you have been referring to for all the various wines that are from the different districts of the Charente?—All the wines that we buy, certainly. We have not a different still in any of our distilleries except as to size. The size of the stills varies sometimes, but the principle is always the same.

15158. There is no fractionation. The head is not higher?—No, certainly not.

15159. Are there any other forms of still actually used in the Charente to your knowledge?—As far as my personal knowledge is concerned the only stills are those stills of which we sent the photographs from Maresté. If you prefer having an explanatory note on the still A Premier Jet I can give you one. I have brought one with me.

15160. I should like to have it?—I will hand it in later.

15161. Do you consider the brandy produced by this other still—A Premier Jet—an inferior brandy?—By no means inferior; that is to say, if it is done carefully, because you can distil it in absolutely the same way. You can make the brouillis and run your brouillis, if you like. It is done more from motives of economy, because, of course, as you will see from the explanatory note, you can distil your brandy much quicker. We have never employed them ourselves, but according to the general theory of those stills, if you hurry the distillation certain ethers do not pass, and it is quite possible, from an analytical point of view, there would be less ethers in the brandy that had been distilled by the A Premier Jet if it had been hurried, but otherwise there is no prejudice. The brandy has just as much right to be called Cognac brandy as though it were distilled in a pot still. I went to Maresté and asked him if he knew of any other still, and he merely said he did not make any other.

15162. He is practically the maker for the whole of the Cognac district?—There are several makers besides, but he is one of the largest makers. He makes different classes of stills for different countries, but not for France, or the Charente, at least.

15163. I suppose before the ravages of the phylloxera took place most of the brandy that was exported from France was mostly Cognac brandy?—To the best of my belief entirely Cognac brandy.

15164. So that since the time of the phylloxera we have had brandies imported from other parts of France other than the Charente district?—Yes; but there is the French law that provides for different coloured acquits for different qualities.

15165. It is commonly said in this country that the more complicated still came into use after the phylloxera trouble?—I do not know of any to my personal knowledge.

15166. A few questions as to the chemistry and as to the aid that chemical analysis can give you in detecting fraud. Do you find that it can give you any assistance in your own products? Supposing a bottle bearing your label is refilled with a brandy which is not yours. Of course, taste would be one test?—Taste is the great test.

15167. Does chemical analysis help you at all?—Chemical analysis at one time helped us very considerably, I believe, because there is a great difference in the quantity especially of higher alcohols, but I am afraid from what one hears—I do not know it from personal experience—that chemists nowadays can furnish a certain quantity of these higher alcohols and ethers which rather prejudices the question of analysis.

15168. Do you know anything of the standard that has been called in this country the ether standard?—Perfectly. Everyone in Cognac has heard of that standard, and, as a rule, I believe most brandy has had that standard, but the quantity of ethers varies according to the different years. You cannot say

down a hard and fast rule as to what should be the quantity of ethers, because they vary as regards the year. There are more ethers and more acids in the wine in some years, and in addition to that I believe if you hurry the distillation very much you probably get a lesser quantity of ethers. That is the opinion of M. Ordonneau, who is a very clever chemist, and I believe it is thoroughly justified.

15169. Do you know of any undoubted Cognac brandies that would fail to come within the ether standard that I speak of?—We have had our own brandy analysed to see, but have never found less than 80, but the general opinion was that in certain years it may come under that standard. I believe that when it does it is to a certain extent due to the distillation having been slightly hurried. I think cases have been found by chemists in Cognac where there has been less than the quantity that was suggested as the standard. Generally you find more.

15170. (*Dr. G. S. Buchanan.*) The practice of your firm is to buy the wine and to do the distillation, is it not?—Exactly. That has been our practice for some years past. At the time when there was, so to say, a dearth of wine in the Charente, we, like many other firms, had adopted the system of distilling, and we have maintained it to a great extent. Naturally we buy brandies also to a much less extent and especially older brandies we buy from proprietors.

15171. In many cases the proprietors of the vineyards have their own stills and distil their own brandies?—Exactly so. We ourselves, before the phylloxera period, also bought from the proprietors. It was only when there was a dearth of wine in the country that we took to organising distilleries.

15172. But whether the wine is made by the proprietors at their farms or whether it is distilled, do you think the method of distillation is practically identical?—Yes.

15173. Would you give us the date at which the phylloxera trouble began?—I was a young man when I went out there, but in 1875 we began to feel its effects seriously. 1878 was the last vintage, I believe, to the best of my knowledge, that was quoted as a vintage brandy for some years afterwards till the vines were replanted.

15174. When can you state that it stopped or was neutralised by replanting?—Personally, I am not a proprietor, and I do not think I am a good witness to deal with that question. My information on that matter is less definite than that of others.

15175. With regard to the wines that are produced in Charente, they have a special quality which produces the characteristics of Cognac brandy?—That is so.

15176. The wines themselves, as drinkable wines, are distinctly inferior, are they not?—I think you require to have been born and bred in Charente to like them. There is a good deal of acid, as a rule, in Cognac wines. The champagne wines are a higher growth for the brandy. The wine is more disagreeable to an ordinary palate.

15177. The character of the wine is a very different thing from the character of the brandy?—Entirely different.

15178. The distillation of a good wine does not mean that you get a good brandy?—By no means.

15179. In your distillation you receive the distillate, that is to say, the brandy when the distillation is complete, into open casks?—Yes.

15180. There is nothing in the French administrative system for collecting revenue which corresponds to the British system of locks and keys, or lock-up tanks, and that sort of thing?—No; only when we have finished distilling we are obliged to have our stills sealed by the Excise, by whom the stills are unsealed to begin distilling the next year.

15181. It is a different system of administration?—Entirely.

15182. It does not involve locking up?—It does not involve locking up.

15183. You told Dr. Adeney that in certain years brandies in your experience had been under the standard of ethers or were thought to be. Were you speaking then of certain special distillations, or did you mean a mixed brandy like Martell's One Star or Three Star brand?—I was speaking of the distillation of the years because the ethers vary according to the year, whether the vintage has been a successful one or not.

15184. There might be years in which if you mixed only the brandies of that year your mixture would still be under the ether standard?—Not for our proper distillation. M. Ordonneau, who, I believe you consulted as a chemist, analysed our different brandies, and never found less than the minimum.

15185. (*Dr. Adeney.*) You speak of your own case. Have you known of any other case?—Only by having heard it stated by other chemists. I believe some have found as low as 65 of ethers in certain years.

15186. (*Dr. G. S Buchanan.*) I understand you have not consulted M. Ordonneau or other chemists with a view of getting a series of analyses, which showed the characteristics of your product as you send it out?—No, all the brandies as we distil them have more ethers than the minimum, and it is not necessary to re-test them on their going out.

15187. I was not thinking you were doing it for your security in that way, but for your possible guidance in dealing with cases of fraud. Dr. Adeney asked you if you had employed chemical analysis in connection with fraud?—No, we have not.

15188. If you were to attempt it that would be obviously the way to do it—to obtain a series of typical analyses?—Yes, to find the proportionality between the higher alcohols and the ethers.

15189. Can you tell me as regards the export business to this country the youngest age of brandy that you send?—There are, of course, distinctive marks. A new brandy, as Mr. Martell himself explained, gets known if the vintage is quoted. We quote the brandies as 1904, 1905, or 1906. They are absolutely the product of the year.

15190. But to take your case of bottle trade—that is your main trade?—Yes.

15191. Would you care to say what is the youngest age?—We do not give a definite age. Of course, we endeavour to keep them as distinctive marks, but certainly the age of those brandies is, I believe, considerably more than has ever been suggested in England with regard to any restriction for maturing.

15192. More than two or three years?—Certainly more than two or three.

15193. Even in the case of the One Star brand?—Certainly more than that.

15194. Have you been concerned with any action taken in this country by your firm to deal with brandy which is sold as Martell's brandy but which is not Martell's brandy?—We have had occasion to do so several times, and we have obtained injunctions against people to prevent them re-filling our bottles with spurious brandy.

15195. Have you attempted that to any large extent?—One cannot say to a large extent, but it is watched, and if there is suspicion of the thing, representations are made to the man and he is warned, and he has been obliged to take an engagement on several occasions not to repeat the offence. One cannot bring a law suit and ask for an injunction on every occasion. I am afraid it would be very frequent if we were obliged to put the law in motion for each case.

15196. (*Dr. Adeney.*) What is the kind of evidence you rely upon to prove the fraud?—The evidence, to start with, is principally tasting, and it is palpable. As a rule one has had witnesses to prove it, but there is generally an avowal on the part of the man who has practised it that it has been done. We have not as a rule tried the question of scientific analysis for it; it is more the tasting that has been depended on, and, I am very sorry to say, that it is most unfortunate for those who have to drink what the bottles are filled with.

15197. (*Dr. G. S. Buchanan.*) I rather gathered that in your firm you have been dropping the business of sending brandy in cask and increasing the bottle trade?—We find, unfortunately, as Mr. Martell told you, that the demand for bulk supply has consider-

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ably diminished owing to none having been sent for a great many years after the phylloxera invasion, and the trade had, so to speak, been lost to us to a certain extent.

15198. Is part of the reason why the cask trade has diminished that you have to compete with cheaper brandies which are not entirely Cognac?—That I cannot say, really. I think that the general importation of brandy in bulk in England must have diminished to what it was in the pre-phylloxera days.

15199. I wondered whether one of the reasons of your taking to the bottle trade and the success of the bottle trade was that it was regarded as a means of bringing your product in a pure state more before the public?—That is perfectly true, because the brandies shipped in bulk were kept by the importing houses for some time over here before bottling them.

15200. (*Chairman.*) When you had to take proceedings to obtain injunctions against the use of the word "Martell," how was the word employed—was it on the bottle?—In those cases that I understood the other Commissioners to ask me about, it was with regard to re-filling our bottles that bore our labels with spurious spirit, which spirit was put into them in certain public-houses. The bottles are re-filled with a much cheaper brandy, and then it is sold under our label.

15201. I do not know whether you would know where the label would come in, as it were, to effect the fraud. Would it be shown to the customer?—Someone would go into a public-house, ask for Martell's brandy, and he would be supplied with an article that was not Martell's. Then they would endeavour to obtain sufficient as a sample, either in a glass or pour it into a bottle, so that it could be taken to our agents to be examined.

15202. You have not told me yet how the label came into play. The customer goes into a public-house, and, according to you, says, "Give me a glass of Martell's brandy"?—Yes.

15203. Then the publican pours out a glass of brandy from a bottle bearing your label. Does he show the bottle?—Yes. You have the right to ask him to show you the bottle, and he does. He takes down the bottle from the shelf.

15204. But it is by showing the bottle to the customer with the label on—a true label but false contents?—The contents are different.

15205. (*Dr. Adeney.*) What kind of spirit have you found has been put into your bottles in the case of this fraudulent re-filling?—As a rule, I believe they are brandies that have emanated from France with a red acquit as having industrial alcohol in them in many cases. I have seen cases myself where it was very bad.

15206. Did you ever know it to be mainly grain spirit coloured with caramel?—I doubt very much whether it was an absolute grain spirit. In fact, I think sometimes the grain spirit itself would have been preferable. It is the ingredients that have been put in to endeavour to give it a brandy flavour that are so obnoxious.

15207. Would you think the alcohol was originally wine spirit that is used for this purpose?—When imitations are made they are so bad that it is very difficult to say what proportions there are.

15208. (*Dr. Cushny.*) As I understand the Excise gives a white label to your firm for brandy?—They do not give us any labels that are put on the bottles; it is simply that our brandies are kept under two denominations, two acquits; both of them are a guarantee of the brandy being pure, and they deliver our permit when we are exporting goods. They deliver us a permit either of the year 1872, which was a guarantee of purity, or for young brandies, vintage brandies since 1903, when the certificate of origin came in. All our brandies are under those permits, and they gave us a similar permit to export it to the permit we have had on making it.

15209. It involves a good deal more work for the Excise. Do you pay them anything for that?—No. We have no officer in charge. They have the right to come into our premises whenever they like, and into our distilleries. They sometimes pass the night there. They ring up the distillery at 12 o'clock at night sometimes and come in and examine everything. Everything is at their disposal.

15210. They do not make any special charge?—No.

15211. Then with regard to the small owner of a vineyard who distils brandy. How does he get the acquit?—He is not really subject to the visits. He has to make a declaration of the wine that he makes and declares the quantity of brandy he has made from it, and he is responsible to the Excise for that quantity of brandy, but he is not visited. The proprietor who wishes not to be visited by the Excise has not the right to buy wine from another proprietor. He must only distil his own growth.

15212. Then this vineyard brandy gets the acquit too?—Yes, absolutely, and it is always distilled pure. They cannot get any wine from anywhere else. They can only distil their own wine.

15213. It is simply from the calculation of the size of the vineyard?—Yes, and you have to make a declaration to the mayor of your commune of the quantity of wine that you have made when you have finished your gathering.

15214. How much brandy does an average vineyard keeper make?—That is very variable. There are some proprietors with very large vineyards and some with only small vineyards. They declare the quantity of wine they have made and the alcoholic strength of that wine so that the Excise know fairly well what quantity of brandy should be obtained from that wine.

15215. There is no control of their declaration?—They have to declare the quantity of brandy afterwards—the same as they have declared their wine.

15216. But the Excise keeps no control?—No absolute control over the proprietor.

15217. (*Dr. Adeney.*) With regard to the questions Dr. Cushny has been putting to you, what control is there over the farmer against the use of sugar?—At one time when there was less wine in the country I believe a great many people for their own personal use made what they called sugar wine; they put sugar with what remained from the press, but if they wished to obtain a drawback on the duty on the sugar they had to ask the authorisation of the Excise to assist at the operation for making the vin-de-sucre.

15218. It was done with the cognisance of the Excise officers?—It was done with the cognisance of the Excise officers.

The witness withdrew.

Mons. J. Hennessy.

Monsieur J. HENNESSY, called.

15219. (*Dr. G. S. Buchanan.*) You are a representative of the firm of J. Hennessy and Co?—Yes.

15220. The firm does a very large business in brandies made in Charente, and exports a large quantity?—Yes.

15221. You have a large business with this country and with America, have you not?—Yes, and a little all over the world.

15222. With regard to the origin of Cognac. Will you tell us something about that?—Cognac brandy is the produce of the distillation of the wine grown in the neighbourhood of Cognac. In old days the wine was pretty scarce all over the world, and in that country, as the land was very good for the culture of the wine, the quantity of wine made was pretty large. The wine was not very good and did not keep well. They had no means in those days of carrying the wine quickly and cheaply from the country that produced it to the country that did not produce any wine, and the result was that, in my opinion, they started distilling their wines, because they thought it would be a good way to keep them, and to ship them off from one place to another—a small volume and a small weight.

15223. That was the discovery of the brandy trade?—That was the discovery of the brandy trade in my opinion.

15224. That is a very long time ago?—About 1720 or 1740. That was the beginning of the brandy trade on a large scale.

15225. Then your firm probably was there at the beginning?—No. The first Hennessy who came down to Cognac came down there in 1765 from Cork. He had been living in France a little while, but he only put up in Cognac in 1765, and he started a business like most of the firms in the wine trade in Champagne or Bordeaux without intending it, because I have got letters from people in Ireland who were writing to him, "Send me brandy because you are in the brandy district." He was not a brandy merchant, in fact, but he made himself useful by sending brandy to friends, and after that he started a firm of his own.

15226. In the case of your firm, as your business is conducted to-day, you buy very largely, do you not, from the different proprietors who distil in the different districts of the Charente?—Yes, very largely.

15227. To some extent, also, do you distil yourselves?—Yes. In the old days, before the phylloxera, we never had to buy wine and distil the brandy ourselves. We simply distilled, or each of our partners distilled to a small extent the wines produced by his own farm. The phylloxera became a serious disease in 1875, and after 1878 the destruction was complete. When the farmers started re-planting vines with American roots they first managed to do it in some parts of the country where the brandy is not as valuable as in others. For instance, the district that was the most difficult to re-plant was the Champagne district. I have here a map of the country. It is a very rough sketch, but it gives a very good idea of the country and the various growths. *This* is what we call the Grande Champagne district, and *this* is the Cognac district. (*Pointing on the map.*)

15227*a*. There are these four areas in that district—the Grande Champagne, the Petite Champagne, the Borderies, and the Bois?—Yes.

15228. Although you buy from all these districts you do not buy for the purpose of your manufacture outside any of these districts?—No. Nowadays I am pleased to say we find nearly as much brandy as we need in quite the best districts of the Grande Champagne and the Petite Champagne, and the best districts of the Borderies and Bois. We started buying the wine when the vines were destroyed. The farmers became very poor. Most of them sold their stills, and when they replanted their vines—the land is divided to a tremendous extent—they had very little money, and they had to manage it as best they could. As soon as they started gathering crops and getting a little wine, the only thing they wanted was to get rid of their crops as soon as possible and get the ready money to pay their expenses and live on. In those days we had the wines from the farmers and distilled them ourselves, because they could not afford to keep the wine even long enough to distil it. About Christmas they generally paid their expenses. If they could not have got rid of their crop at Christmas they would have been very miserable. Our farmers are very small people, but now, since 1900, they have made a little more money; they have started stills again, and the number of farmers we buy from, and can buy from, increases from one year to another very rapidly. In fact, we buy as much as we can from the farmers, and we only keep distilleries to distil the wines of the few farmers who have not been able yet to buy stills. The great advantage we think about it is that it works better in favour of the country, because the man who can distil his brandy can sell half as new brandy and keep practically half to sell as matured brandy. The difficult part of our trade is that a brandy, although it is made with very cheap wine, is consumed like very good wine of very good quality, which has to be kept for a certain number of years. In old days the farmers used to keep their brandy for a certain number of years to mature it. The merchants on this side used to keep a large quantity also. Now the merchants on this side will not buy large amounts of brandy any more, and the farmers cannot afford, up to the present, to keep very large quantities of brandy. But, in my opinion, it would be better for the country if farmers would build up a stock like they did in old days, and like they did very fortunately, because it enabled the brandy trade to keep up during the phylloxera period. That is why I myself have always been very much in favour of encouraging the farmer to distil.

15229. We had the opportunity of seeing several of the stills?—Yes.

15230. (*Dr. Adeney.*) The number of farmers you actually buy from is very considerable, is it not?—Yes, it is considerable. It has increased and doubled every year. As soon as they get a little money they are keen to buy a still. It costs them about £60 or £80, and they start distilling and keep a certain amount of their brandy in stock. The Excise does not trouble the farmers very much.

15231. (*Dr. G. S. Buchanan.*) You receive these various brandies and you blend them and mix them in your various establishments in the Charente?—We have got but one establishment. All the others are simply places to keep brandy to mature.

15232. As regards your export trade you export from France mainly in case—in other words, in bottles, do you not?—Nowadays, yes. We used to have a very large trade in bulk, but it has fallen very largely owing to the increase in the price of brandy. We stopped it when the brandy was so scarce that it could not be shipped, and it never came back again to the same extent. We consider that the public is more in favour of our bottling, because it carries a guarantee with it, and we think that the public get better value, because, to a certain extent, rather unfortunately for the trade of this country, we know that the margin between the price we sell at and the price the public get the stuff at is exceedingly small, because the price is very well known. The public, especially in England and the United Kingdom, get our brandies with a very little premium on the price we sell them at ourselves. We know what they get, and our brandy trade keeps on wonderfully well considering the falling consumption of brandy.

15233. You would regard the Cognac brandy as a product that is quite special?—It is produced like claret wine from Bordeaux or like champagne from the Champagne district. It is the produce of the soil. We do not know why it is.

15234. It has different characteristics which separate it, and you think should separate it, from other forms of brandy or from other spirits?—There is no doubt about that, because in nearly all countries where they can grow vines they have tried to make brandy. They have tried to make it in California, Australia, Algiers—in all the countries practically where the vine grows they have tried to make brandy and to compete with Cognac; and if Cognac has kept its name it is simply because——

15235. (*Chairman.*) And I hope it has kept its price. The price is the best test?—The price is decreasing.

15246. But comparatively to the others?—Comparatively to the others it has kept its price and its quality. Take port wine. It is the climate and the soil together that make the quality of the special products, because the same vines can be grown everywhere.

15237. (*Dr. G. S. Buchanan.*) With regard to the distillation as practised in the district, we have had that in general outline from Mr. Harrison. Do you wish to add anything to his description of the stills?—I would like to go into the details of the distillation.

15238. Perhaps I should first ask you with regard to maturing, sweetening, and colouring—that is part of the practice which you adopt?—Yes, we mature the brandies like the farmers do themselves in casks of oakwood which we call hogsheads—hogsheads mature quicker than puncheons, they are rather small casks—if we want the brandy to mature quickly. If we think the brandy should mature slowly, we and the farmers themselves generally keep it in puncheons of 530 litres—120 gallons. That is the usual way of keeping the brandies, because the great thing to be feared in the case of brandy is what we call the wooden taste. The casks may give a wooden taste to the brandy. We sweeten the brandy with cane sugar. We used to put a lot of syrup in our brandy in olden days, and to such an extent that, when the law was passed in England that brandies could not be introduced with 5 per cent. of obscuration or more as brandy, and it had to come in as

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liquor, I have often heard my father say he thought the business was done for, because he thought the British public would not drink brandy if it was not sweetened as it used to be before. According to the law we had to declare the percentage of sweetening. Instead of 5 per cent. we only put 2 per cent. In my opinion, the British public did not notice it. I rather believe if we took off the 2 per cent. they would not notice it either.

15239. (*Chairman.*) You have always had the best of us?—I do not know that, my lord, but it shows more a tradition, in my opinion, than a necessity. Syrup means, in our opinion, simply sugar and water. In old days we used to put a lot of colour in the brown brandies that were sold to a large extent.

15240. (*Dr. G. S. Buchanan.*) Was that caramel?—Burnt sugar. Now the quantity of colour used is very small, and, in fact, I had a complaint a few weeks ago of what I thought very good and valuable brandy. The man told me it was too dark. I said, "There is no way of taking that off; you always think we put colour." We put colour sometimes, but in some circumstances we should like to take it off, which we cannot do.

15241. Have you had difficulty as regards colouring with the United States, or can you comply with their regulations?—We had no difficulty, in fact, but they made a sort of inquest about it. We had to say that we had to put syrup and colour in the brandies, and that it was not deteriorating the brandy, and they have admitted it up to now.

15242. You make the declaration saying that it contains sugar and colouring matter?—Yes.

15243. And nothing else?—Nothing else.

15244. You can tell us something about the delimitation of the district of Cognac, in the interest of the consumer, the wine grower, and the trustworthy merchant?—Yes.

15245. Will you tell us your view about that?—It comes in with the acquit of the Excise. Shall I tell you what I know about the laws?

15246. I think that would be desirable. Shall we, in the first instance, take the question of the Excise action apart from the action under the French laws against fraud? There are two separate things, as I understand. There is the action by the Excise and the action by the law against fraud?—Yes.

15247. As far as the Excise are concerned the primary business is the separation of spirits which consist entirely of the distillate of wine from spirits which consist of other alcohols. The first has the acquit blanc and the second the red acquit, that is to say, wherever they move about the certificate shows by its colour to which of those two primary classes the spirit belongs. The white acquit at present has no significance, I understand, with regard to the actual place of origin of the spirit. With regard, for instance, to Cognac the white acquit does not signify Cognac?—The white acquit with the certificate attached to it simply means that the brandy has been produced by the distillation of wine under the supervision of the Excise but it does not say where the brandy comes from. It gives the name of the parish where the Excise office is, but it does not guarantee that the brandy comes from one place or another. In fact, the farmers who distil cannot buy wine. They can only distil their own wine, and therefore the Excise does not oblige them to follow the rules as strictly as distillers who buy wine and who distil the wine they buy.

15248. In your business when you buy from the proprietors the spirit comes in with a white acquit?—Yes, and we are pretty certain ourselves that they cannot have bought wine, because the Excise would take them up, and they would have to pay a licence to distil wines bought from other people. As the law is they could distil without being interfered with at all by the Excise. They could distil their own brandy and consume it, and they would not have to report it and keep any stock of their brandy if it did not leave their premises, but if they want to have a certificate of origin then they must declare to the Excise before they start distilling what quantity of wine they intend distilling, what quantity of brandy they ought to get, and when they have got it the Excise come and they put down the amount of brandy the farmer has and then put a seal on the stills so that they cannot distil any more, and then they get a certificate of origin; but as the law stands they could distil without it, only they would not get the certificate of origin.

15249. Without the certificate of origin they could not send it about, could they?—They could send it about as spirit with a red acquit.

15250. (*Dr. Adeney.*) If the spirit merchant buys wine what kind of acquit accompanies that in the Cognac district?—It is an acquit of wine.

15251. A white acquit?—Yes, a white acquit to accompany the wine. It is a little bit of paper torn out of a book. One bit remains in the book and the other is given to the man who moves it about, because if he meets an Excise officer he has to show that he has got it.

15252. (*Dr. G. S. Buchanan.*) We will first take the man who distils in the Charente, and distils Cognac brandy. You have told us that the proprietor, if he has his own still, and if he wishes to sell his brandy, gives notice about his distillation so that the Excise man can check its origin, and then when he sells it, for example, to your firm, the white acquit accompanies it?—Yes.

15253. That white acquit, as far as it has an official meaning, only means that it is the product of a distillation of wine?—Yes, it has written on it "Eau-de-vie-de-vin."

15254. Then the distiller in the Cognac district, or the merchant who has only Cognac, may send his brandy for export or may send it about France, but it always goes with the same white acquit, does it not?—If it is kept in the chai séparé.

15255. But he must always keep it under that white acquit in a separate place?—Yes, since 1903. It is an enforcement of the law of 1903, without which the law of 1903 could not work at all.

15256. That has only been in operation since last year?—1907.

15257. The system began on the 1st January, 1908, did it not?—Yes. We knew perfectly well the law could not work at all without separate chais. In 1903 the spirits had to be kept separately, but could be under one roof. Now, since 1908, they must be under separate roofs separated by a public street.

15258. If you have a merchant dealing only in Cognac he need only have one cellar, he has one form of acquit, and that is all he knows?—He already has two acquits. If he starts his business now and buys no other brandy but new brandy he can have but one chai and one acquit.

15259. The two white acquits result from the fact that the present acquit is new, is it not?—It is very complicated. In 1872 was the first law that was carried on until 1900. In 1872 the spirits were covered by three kinds of acquits, white for the produce of distillation of fruits, red for the produce of industry, and blue for the mixture of the two—white and red. All those various spirits could be kept in the same premises. The Excise simply kept account of the spirits produced on those premises, and at first they never interfered if the brandies shipped from those premises answered the colour as long as their own interest was preserved, and as long as the quantity of pure alcohol to pay the duty was exactly the same. In 1900 we had a law that increased largely the taxes of spirits in France, and the result was that the sale of brandy became not smaller but cheaper, and then the publican and retailer tried to save the duty on the quality of the brandy. It raised a hue and cry among the vine growers, the quantity of wine made in France had increased since a certain number of years, and in 1903 the Parliament had to pass a Bill, giving not a protective duty which we asked for but a kind of protective guarantee on the spirits made of fruits, and that was when was started the new acquit and the certificate of origin—the acquit white and the acquit red. We said, "It is all very well, but you will not give us a certificate of origin of brandies which have been distilled before 1903 without interfering with the distilling," and the Excise said, "Certainly not, we will have the red acquit." We said, "We will not have them under the red acquit, the brandies are made of wine, and especially in our Cognac district we will not have them under an acquit which can diminish their value and spoil their char-

acter." They said, "It is quite right, we will keep the acquit of 1872 for brandies distilled before 1903." It is an acquit which will probably disappear; there would probably be very few brandies left after a certain number of years. Now we have three acquits since 1903—the acquit of 1872 for brandies distilled before 1903. They have a white certificate if they had a white certificate in those days, and they have a red certificate if they had a red certificate in those days. Then we have the new acquit certificate of origin. This acquit covers the brandies distilled since 1903, and which have been distilled under the supervision of the Excise. As the things are now, if you have any stock brandies with the white certificate of 1872 you can add to it brandy with a white certificate of origin, and increase the quantity of your stock—acquit blanc—with your new certificate of origin. You cannot do the other way. You cannot get the certificate of origin by mixing the old acquit with the new one, but you can increase the quantity covered by the old one by putting in new brandies distilled with the 1903 certificate. It was necessary for most of the spirit brandy trade, especially ourselves, Messrs. Martell, and the other firms in Cognac, to continue the trade. We should have had a period when we could not have made use of brandies; we could not have mixed new brandy for many, many years with older brandies. They have allowed us to. Then comes the third point. In 1905 a Bill was passed something like your Pure Food Act, although it is not as much in favour of the consumer as it is in favour of the producer. It protects the vine growers. After the Bill was passed on the 1st August, 1905, it was a long time before it could be put into practice. We had several Commissions.

15260. I do not want to interrupt you, but would it be possible for you to continue with regard to the acquits without telling us now about the law of 1905? I am rather anxious to keep those two subjects apart. Are they so intermixed that you must go on?—Yes.

15261. (*Dr. Adeney.*) One question before you leave the acquit blanc of 1872. Does that in any way give a guarantee of origin?—No; but there is one guarantee it gives. When the brandies are not valuable they are not kept for a long time, and so before long it will give a pretty good guarantee.

15262. It gives no official guarantee?—It gives no official guarantee.

15263. (*Dr. G. S. Buchanan.*) But there has been a declaration that it is wholly a wine spirit?—Yes; there has been a declaration when the acquit was started, and the Excise accepted the white certificate. After a certain number of years it would be a pretty good guarantee because the brandies under that acquit are certainly made with wine now, and nobody keeps fraudulent brandies for years. Then in 1905 we started a Bill.

15264. With regard to the 1905 Act what do you say?—That Act has nothing to do with the acquit. One of the results of that law was to decide what districts in France had the right to call their produce by a certain name. For instance, one part of the law decided what was the district of Cognac, and what parishes belonged to the district of Cognac, and you proved that the brandy produced by your vines was Cognac brandy. It is some years since we started that law, and now the decree is ready to be published—in fact it ought to have been published this week. It has not been published because the only one that has been published is the one about Champagne. There have been complaints about it. I saw the Minister of Agriculture last Thursday, and I said, "You told me you would publish your decree this week." He said, "Yes, but I am waiting till the question is finished." It ought to have finished the day before yesterday, and it has been put off till next Friday, but I expect next Friday or Friday fortnight the Minister will publish the decree that limits to parishes in the Cognac district the right to call their produce "Cognac." Then we arranged with the Director of Excise according to the rules of the Excise published after the law of 1907. Up to now the Excise says, "I see you put wine in your stills, and I see that the brandy is made of wine, but as there is no law telling me what is the Cognac district the only thing I can say is that the wine has been produced by such and such a parish." The result, according to the law of 1903 as it is enforced, is that you could have bought in various places the brandies made in various parishes, and you would have had a separate acquit for each parish, but you could not ask for the same acquit covering all the parishes in the Cognac district. But now he has promised us that as soon as that law has been published and enforced then the Excise will give us a certificate of origin bearing instead of the words "Eau-de-Vie de Vin," the words "Eau-de-Vie de Vin Cognac," so that practically the certificate of origin will be created and nothing can prevent the merchants from keeping in a separate room brandies bearing the certificate that will be entered on the same certificate when the shipper ships them. But then we will have three certificates for the brandies: acquit 1872, acquit d'origine, and acquit régional. The Excise people tell us, "We will never give you a certificate of the origin of Cognac for brandy distilled before the law of delimitation," and that is quite right. They say, "Our certificates are sometimes discussed in other countries, and we want to keep them as pure as possible, and we will not have anybody capable of proving that we have given certificates for brandies that are not absolutely what we expect." Therefore they tell us that even with the brandies which have been distilled since 1903 with the certificate of origin in the district of Cognac—in what we know as the district of Cognac—"We will not give them a certificate because if we knew what the district of Cognac was by tradition we did not know what it was by law."

15265. Are there no proposals to meet that by a declaration in the same way that you met the difficulty with regard to the white acquit originally?—That is what I would like them to do. I would like them to block those two acquits of 1872 and the acquit of origin Vin in the Cognac district, but it is not very pleasant because "Origin Vin" does not mean "Origin Cognac." We should have to face it. The vine growers are very much in favour of the theory because although the certificate of origin given to all the brandies made in the Cognac district would not be equal to the acquit régional, if you stop the spring the stream is very soon empty. The thing is to stop the tap. We only want the certificate of origin to be able to trace the quality.

15266. Then the position at present is this, that within a very short time, a few weeks, there will be an administrative decree identifying the products of the two Charentes and "Cognac"?—Not the two Charentes.

15267. Certain areas?—Yes. We proposed giving the two Charentes, but the Conseil d'Etat would not have it because some parts of the Charente do not produce either wine or brandy.

15268. You will have defined certain areas in the Charente from which only the title "Eau-de-Vie de Vin de Cognac" can be obtained?—Yes.

15269. One consequence of that will be necessarily that there will be separate places in which brandy distilled after the date of this decree will have to be kept?—That is not yet settled, because up to now you could keep in the same chai, as long as you keep separate accounts and separate rooms, brandy made of wine under the white certificate. As long as it is white you can put it in the same chai. If it is only a red one you have to keep it apart.

(Adjourned for a short time.)

15270. (*Dr. G. S. Buchanan.*) I will go back to the question of acquits for a minute and endeavour to summarise what you have told us. Perhaps I may put it in this way, and you will correct me if I am wrong: The system of acquits has two objects, which are the protection of the revenue side and also, to some extent, the prevention of fraud on the public by misdescription. I take it that the acquits, so far as they relate to the prevention of fraud, are primarily intended so that the intermediary merchant or retailer shall have some guarantee as to the character of the spirits that he buys?—Yes.

15271. One of the intentions of the system is that the merchant and the retailer shall know, when they buy spirit, what is the character of the spirit?—Yes.

15272. There are three kinds of acquits at present?—Yes.

15273. The acquit blanc for spirits made under the supervision of the Régie since 1903?—Yes.

15274. That includes eaux-de-vie naturelles, that is, eaux-de-vie de vin and other eaux-de-vie which are obtained from fruits?—Yes.

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15275. But no spirit can receive the acquit blanc if it is derived from grain, or from beetroot, or if it is alcool d'industrie?—That is so. That word origin has always been a difficult thing because origin simply means the stuff that has been used to produce the brandy, and not at all the country from which that stuff came.

15276. The acquit blanc as it exists at the present day has nothing to do with the place from which the brandy comes?—No.

15277. Or where it is distilled?—No.

15278. It merely attests that it is made of wine or cider and so forth?—Yes.

15279. Or rum?—Yes.

15280. (*Dr. Adeney.*) Or gin?—Or gin.

15281. (*Dr. G. S. Buchanan.*) But in all cases derived from a distillation of fruit?—Yes.

15282. As a matter of fact in these acquits there is a statement whether it is eau-de-vie de vin, or whether it is eau-de-vie de cidre, and so forth?—Yes.

15283. There is a second acquit blanc which is used for spirits similar to those covered by the acquit blanc that we have just spoken of, made under the law of 1872, which originated the use of this acquit?—Yes.

15284. I understand that these acquits were given on declaration by the distiller?—Yes.

15285. That the spirits were what he described them to be?—Yes.

15286. When the law of 1903 came into force the holders of stocks of spirits declared the origin of the spirits, and those who held stocks who did not make the necessary declaration would be only entitled to the third acquit, to the acquit rouge?—It is sometimes given for very valuable brandy that is kept by the landowner, who would not declare it because they look upon the Excise as their mortal enemy, and also sometimes in the hope that they may avoid the death taxes.

15287. That has become of little importance now?—That is so.

15288. The two white acquits represent solely the distillation of fruit, as against the third kind of acquit which is the acquit rouge or acquit rose and used for all other kinds of spirits, including mixtures of spirits such as wine spirit and grain spirit, and wine spirit and beetroot spirit?—Yes.

15289. Anything at the present day which goes out with the acquit rouge is a spirit for which the Régie take no responsibility as regards the material from which it was obtained?—That is so.

15290. Of course, as you have pointed out, it may be Cognac?—Yes.

15291. But under ordinary circumstances no man who had Cognac to sell or to send to you would wish to send it to you under the acquit rouge?—No, not under admittable circumstances. It is done up to a certain extent. For instance, a good many merchants in other parts of France will not go to the trouble of keeping two stocks, they keep one stock, and it is all in that. If they have even good brandy they say they do not mind getting it in red. It is of no interest to the merchant, but the merchant of Cognac ought not to do it because he has no interest in it. If there is an interest it is to defraud the Excise, and get rid of some red acquit, and replace it in some way or another.

15292. It comes to this, that out of a cellar or chai which is under the red acquit you may get in exceptional circumstances a genuine grape spirit or Cognac?—Yes, you may get it.

15293. And some people rather than take the trouble to separate their chais will keep Cognac in that way?—No, not in the Cognac district but in other parts of France.

15294. But into each of the chais under the white acquit the only brandy is that which is obtained from the distillation of grapes?—Yes.

15295. Which may be Cognac?—Yes, or it may be a mixture of Cognac and other wine spirits.

15296. And very often is?—Yes, to the best of my knowledge that is so sometimes.

15297. We saw it in Cognac and there was no secret about it?—Yes, wine growers and the police have started a few cases against it.

15298. I will still keep to the acquits. The wine-growers of the Charente would have no complaint against a man who had a mixture of Cognac and other wine spirits under the white acquit, but their objection is when he sells it as Cognac?—That is so.

15299. That is another question?—Yes.

15300. But as far as the acquits are concerned all that he has undertaken at the present time is that it is of grape origin?—Yes.

15301. Have you any reason to believe that these requirements are not observed? What is to prevent a man taking spirit from his red cellar and putting it into his white cellar?—It can be done, but the two chais, as they call them, have to be separated by a lane or public street. It can be done, but it cannot be done easily, and it cannot be done to a great extent. It is like burglary. You cannot prevent people from at night taking casks from one chai to another, but it is difficult and cannot be done to a great extent. The two chais in my opinion make it pretty safe.

15302. The penalty is a heavy one?—Yes, it would be very heavy and according to the French law they can always confiscate the goods. There is a £20 or £40 fine, but they can confiscate £40,000 worth of goods. The confiscation has nothing to do with the amount of fine paid.

15303. I understand that if any spirit from the acquit rouge place is taken into the acquit blanc place the whole of the contents of that acquit blanc place become red?—Yes.

15304. That might be a very heavy penalty in itself?—Yes.

15305. A man could not remove any of his stock without a red certificate?—Certainly, but that would not be considered a penalty.

15306. (*Mr. Guillemard.*) Would it be red for all time?—Yes.

15307. (*Dr. G. S. Buchanan.*) When that happened would everything that came out of that chai always be red?—Unless it is again entered completely.

15308. (*Mr. Guillemard.*) If he entered it afresh he could start right again?—Yes, but that would not be considered a penalty. He would have to pay a fine and he would be punished differently. That is simply an effect of the law; the Courts would not have to give their opinion about it. The law says that if you put spirit with the red label into a store which has white spirit in it, it all becomes red under the certificate. A man could not discuss it before the Courts.

15309. (*Dr. G. S. Buchanan.*) In addition to these three acquits that you have been describing to us which exist at the present time there is, I understand, a probability of a new acquit, which is a regional acquit, which relates only to the distillation in the Charente of wines grown in the Charente?—Yes, in the Cognac district as delimited.

15310. And that in consequence of this delimitation new regulations will be made as to the keeping of these spirits apart, and the system of terms and so forth will have to be revised? There will have to be some revision?—Very little. The law as it is now enables you to get a certificat d'origine for brandy made of wine of such and such a parish. The only thing is that when the Cognac district is delimited, that parish will be included or not in the Cognac district, and that therefore instead of having Eau-de-Vie de Vin, you will have Eau-de-Vie de Vin d'origine de Cognac.

15311. That I understand, but it will be necessary to make some regulations for keeping this Eau-de-Vie de Vin d'origine de Cognac apart from other spirits which are mixed spirits?—It is already in the law. You can do it if you like as the law is already, and as the regulations are already.

15312. You have explained to us that you can do it already, but my point is that if you delimit the Cognac area and have a special acquit for what is entirely Cognac, you must do it in order to make the delimitation effective?—You are obliged to. You have a special chai, in which you place under bond brandies that have been bought with the new certificate. Then you will be entitled to take them out with the same certificate as you can do now, only now you could not have a certificat de Cognac, but could only have a certificate of a parish, and you

would have, therefore, to have as many chais as there are parishes. You can always have a private chai for a special kind of brandy.

15313-4. And get a certificate for that?—Yes, and it certainly will be carried out because we do not require any law. When the delimitation is a fact, the Excise will simply say: "We are willing and cannot refuse to give you a certificat eau-de-vie de Cognac, and with that certificate you can do what you like. If you put it in a chai under our supervision, where no other brandy has been entered, we, the Excise, cannot refuse to say that the brandy is exactly under the same acquit. You are not obliged to put them there, you can put them where you like.

15315. You can put them in an acquit rouge?—Yes.

15316. (*Dr. Adeney.*) And then you lose your certificate?—Yes.

15317. (*Dr. G. S. Buchanan.*) Under your new scheme, to get the certificat d'origine, which means that the Excise guarantee it to be cognac, you must keep it apart?—Yes.

15318. Can you tell us to what extent, or on what ground that certificat d'origine, given by the Excise, is likely to help the genuine cognac of the Charente people?—It will be a help in this way: that the two other white certificates and the declaration ought to become but one certificate, to make it more simple. That we would like to call the acquit stock de cognac. This would cover all the brandy that we distilled before 1903 under the benefit of the white certificate, and all the brandy that we distilled since 1903, and was declared by the owners as produced in the Cognac district. There is no guarantee that it is Cognac brandy, but when once that is done, that quantity of brandy could not be increased except by adding to it the new certificat d'origine de cognac, and, therefore as you said a moment ago, if a certain amount of brandy made of wine from other districts has ever been put in stock and intended to be sold as Cognac brandy, it could not be done in future. The spring would be stopped, or, at least, out of the two springs, the right one would remain running and the wrong one would be stopped. It can be done by anybody, even if it is not the law, because a merchant could always prove that he has bought nothing else and put into his bond nothing else but brandy with the Cognac certificate. It is difficult to go back for a long time because the Excise practically keep their books only for three years, but during the three years you could prove it.

15319. So far as this new action is of advantage it must arise on the assumption that what is sold to the public as cognac can be traced back to its origin, and it can be ascertained whether it is really cognac or not?—It ought to be, but I do not say that it can be now.

15320. But the object of this is to enable you to go to a vendor or a merchant who sells cognac and labels his bottles cognac, and thereby affirms that it is cognac and finds out whether or not it is cognac which he sells?—Yes.

15321. Unless you are able to do that it seems to me that this system of acquits and regional delimitation and all the rest of it is not going to help?—It helps to a certain extent the wine-growers. It is not very noticeable in the cognac district, but when they sell to merchants the fact that there is a delimitation enables the wine-growers in other parts of the country to sell their wines more easily. For instance, if they come from a district that, according to the law, is considered as the champagne of Rheims district, or if, on the other side, they come from a part of the country that is not considered in the Cognac district, but in my opinion it has no particular effect if it is not enforced by the acquit régional even further than what I have told you.

15322. (*Dr. Adeney.*) Do you expect assistance from the administration of your Régie in the protection of your cognac produce?—Yes, they are the only people to help us. The Excise is willing as long as the revenue is safeguarded.

15323. (*Dr. G. S. Buchanan.*) The Excise by themselves cannot safeguard you satisfactorily?—The point of view of the Excise is that the revenue is cleared and they are certain of getting a full tax on the spirit. They sometimes say, "After all, we do not mind what spirit it is so long as it pays the full tax." There is another claim we have, which is to try to get a kind of premium for the brandy made of wine. For instance, in France they pay 220 francs on a certain percentage of alcohol, and we would like the tax to be reduced to, say, 180 francs for brandy made of wine or brandy made of cider.

15324. (*Dr. Adeney.*) That is what we call a differential tax?—Yes. We may get anything once the wine-growers are up in arms and rioting, like they were a few years ago in the South of France.

15325. (*Dr. G. S. Buchanan.*) That disposes of the question of acquits. Now, with regard to what Dr. Adeney was saying, really the value to you mainly lies in the extent to which the method of sale of the cognac or spirit is supervised and looked after?—Do you mean the sale to the public?

15326. Yes?—That is impossible. That is theoretical. You cannot follow the spirits until they are consumed. If you understand what I mean, it is only theory to believe that you can give an acquit to brandy and that that acquit will follow the brandy until it gets into the tumbler of the consumer.

15327. You did not understand my question. The object of these acquits is that the other machinery—the law for checking the proper sale of these things to the public—can be enforced?—I do not understand you exactly. When a merchant in one part of France or in England buys from a cognac merchant cognac brandy I want to make it certain that he gets cognac brandy.

15328. Does the acquit help you to do that under the new system?—Yes, I think it will help us.

15329. The new acquit will be a help between merchant and merchant?—Yes.

15330. And between distiller and merchant?—Yes. There are not many difficulties now between the distiller and the merchant. The merchant knows pretty well what he gets from the distiller.

15331. And as between the merchant and the public, that is outside the question of acquit altogether. By the time you have the merchant selling to the public he has done with his acquit?—He has paid his duty and he has got his congé, so that there is no acquit. Then it comes to the 1905 law, and there is the labelling of it, but that has nothing to do with the acquit.

15332. But if you are investigating in the service for the repression of frauds whether a label of "cognac" was correct or not the regional acquits would assist you, would they not, because you would be able to trace the thing back?—It would enable the merchant to prove that he had the right to use the word "cognac" on his bottle, but the prosecutors could not punish him simply on those grounds, because he is not obliged to sell with the white certificate, although practically it is always done.

15333. Supposing he was falsely selling as cognac what was not cognac, it would enable you to go to the merchant and ascertain whether he had spirit that was entitled to the word "cognac" or not?—That is how it is done. A bottle of brandy sold as cognac is picked up by the agents of the fraudulent system, and they will go to the merchant, and if the merchant can show that he has bought that brandy with the white certificate coming from Cognac they will have to go to the cognac merchant and tell him, "It was not cognac brandy that you sold," and if he can prove it is cognac brandy so much the better for him. With the new certificate he will be able to prove it, but with the present one he cannot prove it, and he can only prove that it is wine brandy.

15334. Now with regard to the law of the 1st August, 1905, against frauds. That is an important law, is it not, that has made a considerable advance on the old law?—Yes, it is a very important law. We have not been able to settle how it will be enforced completely. Up to now it includes those delimitations.

15335. It is a law which is still being made?—Yes.

15336. It was supplemented by the law of the 5th August, 1908, which prescribed for definitions and descriptions of foods being laid down?—Yes.

15337. And, I believe, also permitted that delimitation of regions that you have spoken of?—Yes, but before that we had to decide to delimit, otherwise it meant nothing. What is Cognac brandy, if you do not delimit the country? There is no answer to it.

15338. I have had an opportunity of looking through the law itself and a series of published official regula-

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tions given me by Dr. Roux. I see that the central service in connection with the system was established in April, 1907, by décret?—Yes.

15339. That set up not merely a central office and laboratories, but also regional inspectors in aid of the central service, and they have now an inspector-general and 14 inspectors, whose duties are supervisory to see that in the provinces these regulations are carried out?—Yes.

15340. Then the service itself is undertaken and carried out by the Prefects through certain agents who are authorised, and under specific instructions given in circulars and décrets which are sent to them?—Yes.

15341. One of the principal objects of this law is to secure that articles of food and drink sold to the public under particular names are properly described, is it not?—Yes. The law of 1905 does not oblige you to describe the goods. If you do not describe them at all you can sell them. For instance, with cognac brandy you can sell a bottle with no label on it, and nothing else but your name, if you like. You have no right to put "Cognac" on it if it is not cognac brandy, but you are allowed not to put a name at all. In the laws of every country generally you have to describe it and call it what it is, in fact. Under that law you are not allowed to call it what it is not.

15342. Under this law, or under the décret of the 31st July, 1906, certain executive officers are authorised in the provinces, and I see among them are police officers, and so forth, and then the Excise officers and the Customs officers—"Agents des contributions indirectes et des douanes agissant à l'occasion de l'exercice de leurs fonctions?"—Yes, to the extent that they are acting as officers of the Excise.

15343. Then market inspectors and agents of octroi, and so forth, can act?—Yes.

15344. In addition to that, by a circular of the 23rd December, 1907, there is the use of agents of syndicates and groupements professionels who may be admitted on the understanding that the agents that are appointed by the syndicates work entirely under the order of the prefect? Once they are appointed they work under the official order?—Yes, they particularly work under the order of the syndicates, because the syndicates pay them, but they have to report everything they do to the prefect.

15345. We had an instance of that in Cognac, where we saw the agent appointed by the Association of Viticulteurs of the Charentes, and we found that he had authorisation from the Minister of Finance to go to the Régie officials and obtain any information he required as to the origin of spirits. I see that in fact all the agents are authorised to obtain information from any of the public departments?—Yes.

15346. As a matter of fact, this agent that we saw was an old Excise officer?—Yes.

15347. Then I find that the central authorities in Paris have already issued a series of rules and administrative regulations with regard to the descriptions and method of sale of wines and spirits, fats and oils, syrups and liqueurs, vinegars, beers and ciders. That is as far as they have got at present?—Yes.

15348. So that they have made very substantial progress since they were established a year and a half ago. These are all new regulations?—Yes, but those rules were prepared by a Commission sitting since the end of 1905. I belonged to it because I was not in Parliament then. It was a Commission that included lawyers, professional men, chemists, and merchants, and we all worked together, or separately, according to circumstances, and practically made it possible to enforce the law and send this to be considered by the Conseil d'Etat, and that became the law.

15349. I have had an opportunity of studying some of those décrets, and they appear to have the object of defining the normal food-stuffs and indicating the practices which may legitimately be employed, and to protect the article against all manipulation in its manufacture which would modify its composition in a fraudulent sense?—Yes.

15350. They appear on the face of them, or some of them at any rate, to have been very thoroughly worked out?—Yes; it was a very long job.

15351. For example, with regard to olive oil and lard, I see that there it is required that the designation under which the oil is sold must be placed on all casks, labels, catalogues, and advertisements, and so forth?—Yes.

15352. In the case of oils and fats again, there is an administrative circular which explains what is to be done to meet the case of mixtures; for instance, olive oil and other oils—the sense in which you must use the words "huile surfine à olive," and so forth?—Yes.

15353. These regulations relate to the way in which notices or declarations should be made in shops and the forms of labels which should be used?—Yes.

15354. For instance, if you are selling oil which is not entirely olive oil, you must not put a picture of olives on the label?—Yes.

15355. Then under this service I see there are 34 provincial laboratories of which 18 are municipal laboratories that have been recognised?—Yes.

15356. And the central department has issued divers circulars on methods to be followed in these laboratories for the examination in the first instance of samples taken by the agents?—Yes.

15357. Then the law has also authorised the appointment of experts for the expertise contradictoire?—Yes.

15358. There is an official list of expert chemists who are available for a further examination of any case in which a prima facie case has been made out, and these experts may be chosen by the person who is accused—he may choose anyone he likes from the list?—Yes.

15359. And the two experts who have the case to examine, work together or separately, as they like?—Yes.

15360. And they are required to have all information and all documents and so forth?—Yes.

15361. Then with regard to the sampling and instructions to the agents, I understand they have power to take samples from warehouses, shops, carts, markets, fairs, railway stations, ports of embarkation and debarkation, and practically from anywhere in that way?—Yes.

15362. And the transporters of goods are required to accede to any requisitions by the agents for permits, invoices, receipts, and so forth?—Yes.

15363. And in regard to information from the Excise the applications of the agents are to be met by letting them see the documents?—Yes.

15364. Then in the case of champagne the Champagne district has been delimited quite recently, has it not?—Yes, it has been delimited about two months ago.

15365. And the matter is not entirely settled?—No. I think it will be settled probably by a vote of the House next Friday. It ought to have been settled last Friday.

15366. There is a new instruction of the 11th of May, 1908, in consequence of the delimitation of the Champagne area, which says that the distinctions between champagne, sparkling wines, and aerated wine which are made by the new law are to be insisted upon, and that the agents are to watch commercial documents, catalogues, advertisements, price lists, and wine cards in restaurants and hotels, and see that these definitions and descriptions are adhered to?—Yes.

15367. That I suppose has hardly been acted upon yet?—Yes. We have had a sitting of the Commission des Fraudes since, which considered the word "fine," where they put that question before us, but there were very few people from the Champagne district that came up to that sitting, and it was postponed. I expect they will have another sitting one of these days, because they do not quite agree on the aerated and gasified wines.

15368. I will take it that the general object of all this is in the first place to establish definitions of the sense in which a particular description should be used and then to see that if the man uses those descriptions he is conforming to the regulation?—Yes.

15369. The system seems more elastic than the system which we have in this country which depends solely on a man taking a sample and sending it to a laboratory. You perhaps do not know of the system in this country, but in France the system is to employ agents and recognise agents including interested trade agents who have authority to trace back samples and to examine documents, invoices, and so forth?—Yes. In this country any man can do it, any man can do

it all over the world if he can prove that he has been defrauded. If I have bargained with a man to sell me a thing and he has not been selling me what he pretended to sell me I can start a case under the Civil Law.

15370. Under the Civil Law, yes, but I was speaking of under your public administration?—Yes, but there is the cost of it and the chance of losing the case, and of having to pay damages to the man that you went for, but with the new law there is no risk. The certificated agents can take samples, but in the case of brandy there is great difficulty. The law obliges us to take several samples and generally the contents of the bottle that is sold or of the glass that is sold do not enable you to take samples and that is why we cannot always have as many cases as we would like. Dr. Roux, whom you saw, is working under the new rules for the chemical products. You can generally take but a very small sample of chemical products from the chemist, the pharmacy—and we expect when the rules of the pharmacy are enforced we shall find a way of applying them to liquors and probably to brandy. According to the new law you have to have four samples which have to go to different people so that the experts may work differently and separately. It is very difficult to get a man who is selling brandy in a bottle big enough to give you four samples, but when you get a cask it is very easy. It is very easy when you get a cask, but when you go into a public-house and ask for a glass of brandy they give it to you and if it is bad brandy you can take the remainder of the bottle from which that has been poured out, but that bottle does not contain enough to enable you to start a case according to that law.

15371. Another point that is being insisted upon in connection with this sampling in regard to wine, and I think also in regard to spirits, is the advisability of the agents taking comparative samples where possible. I see that, in one of the circulars which Dr. Roux gave me, they say it is useful for the directors of the laboratories to know with exactness not only the denomination under which the wine is placed on sale, but also the origin of the wine, its price on sale, and, if necessary, the elements from which it has been blended. In proceeding by comparative samples, it is indispensable to inform the laboratory what are the samples to compare as well as the conditions in which they have been taken, indicating, for example, that they come from different establishments (that of the retailer and that of the supplier), or from the same establishments—one sample taken on delivery at the counter and another sample taken in the cellar from the cask, etc.—and so forth?—Yes.

15372. So far as the present requirements about labelling are concerned, I understand that at present the only requirement is that some statement should be made as to what the spirit is sold as. If it is sold as eau-de-vie, it may be anything, may it not?—Yes, practically. The Commission to which I belonged decided that it had to be a blend of grape brandy and industrial spirit, but as we could not enforce any proportion, it might have been a 100th or 1000th part, and, therefore, practically it can be anything since the new state of law. Before that, it was to be a blend with a certain quantity of grape brandy.

15373. (*Dr. Adeney.*) Have you any idea of the proportion?—We could not guarantee any proportion. We have tried to guarantee it for eau-de-vie fine or eau-de-vie superfine, but it is practically impossible.

15374. (*Dr. G. S. Buchanan.*) If a brandy is sold as eau-de-vie de vin, it must be wholly eau-de-vie de vin, without any grape or grain?—Yes.

15375. Under what title are mixtures sold which contain grain spirit or a mixture of Cognac and alcool d'industrie?—Eau-de-vie. The Cognac when it is mixed is exactly like eau-de-vie de vin. We thought to prevent the use of Cognac fantaisie, and on that point we got satisfaction, because the law does not allow you to blend Cognac with anything else and call it an imitation of Cognac, or Cognac de fantaisie. Therefore the word "Cognac" cannot be used with any adjective, or words which have the effect of altering its sense. It can only be used for Cognac brandy alone.

15376. You must not use the words "Cognac de fantaisie"?—No, that was a great point of the discussion. The word "fine" was not discussed at the first sitting. In my opinion it ought not to have been discussed. There had been a case before the Courts where the judge had declared that whenever a man asks for "fine," he thought he would get fine Champagne, and on that basis the people of the Cognac district said that "fine" was but a shortening of fine Champagne. It is not absolutely proved because the word "fine" in itself means fine or beautiful, and we admitted a system that does not mean much, that "fine" could only be employed for brandies made of wines blended together. The difficulty with us as to the word "fine" was that they have brandies made of cider which they call "fine" sometimes. They say "fine Calvados," meaning fine cider brandy from Calvados in Normandy. Therefore we said that that word "fine" would cover mixtures of natural brandies, brandies made of fruits. It is not a good definition, but is better than nothing.

15377. To revert again to the law and to these décrets and the rest of it. An attempt has been made in France to deal with the descriptions of articles of food by the organization that we have just referred to, and it appears to be a serious attempt on the part of the Government to deal with misdescriptions and falsifications?—Yes. It is not only made by the French Government, but I say it is made all over the world practically. We have meetings that take place every year in different countries, and they have been trying in the States to enforce it. There is a very general feeling of an obligation on the part of the Governments to enforce laws protecting both the producer and the consumer. Up to now, I think the producer has made people hear his view more than the consumer, because the consumer is very lazy about it.

15378. (*Mr. Guillemard.*) You think the consumer does not care?—No, not quite enough.

15379. You think he does not care as much as he ought to?—That is so, and there is a very strong feeling all over the world. You have heard of the Congress on pure food at Geneva. The next Congress is taking place in Brussels, to try to enforce a law that will be carried out all over the world.

15380. (*Dr. G. S. Buchanan.*) Do you think that we in this country should take part in this movement?—In my opinion I think you ought to.

15381. As far as the consumer is concerned, I presume the principle on which you are going in France, as in America and other countries where definitions have been established, is that if you can in the first place attach particular meanings to a particular description, the public will get to know it, and the public will then be in a position to judge whether it is in its interest to have these things or not?—No, I do not consider things quite in that view. You have only to make yourself the servant of the public and to consider that the public when they ask for this or that intend and think that they get it and generally mean to pay for it, and generally have to pay for it. I think the law ought simply to protect the public, so that when the public ask for something they get it. I do not think the definition of goods ought to be settled by the law. I think the law ought to enforce the definitions that are in the public mind. I think the public is entitled to define the goods.

15382. That is to say, the public might define the Cognac in this country as being any sort of spirit that is offered to it as Cognac?—If it was their idea, but it is not their idea. I think there are some instances very difficult to define. The two classical examples are Charbon de Cardiff and Savon de Marseilles. The coal of Cardiff has some qualities it owes to the place itself. No other coal, even if as good, has the right to be sold as Cardiff coal. But take Savon de Marseilles—soap of Marseilles—which is a kind of soap. People have that kind of soap; it does not mean they want a kind of soap that comes from Marseilles, it does not get any particular quality because it is made in Marseilles, but they want a soap that is made like the soap of Marseilles—it is a type. I think in that case if we made a law that soap known as Savon de Marseilles should come from Marseilles, we should be going further than we ought to, although it would be a good thing for Marseilles town.

15383. But surely what you yourself have been trying to bring about, namely, this delimitation of the Cognac area and the definition of Cognac is precisely with the object of which you have been speaking. You want to limit the Cognac so that people can understand as Cognac what comes from Cognac?—Yes. I say to them, "what do you, the public, think you get when you get Cognac? What

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is the country where that Cognac ought to come from in your idea?" It is a fact that there have been discussions as to the delimitation, and we could only delimit the country on tradition.

15384. (*Dr. Adeney.*) With a reputation?—Yes, with a reputation. The Commission proposed the two Charentes because all the brandies made in the two departments of Charente and Charente Inférieure are Cognac brandy. The advantage was to get an easy delimitation, but the Conseil d'Etat did not accept the Commission's view, because a small part of Charente does not produce either wine or brandy. The delimitation only includes the parishes that produce wine, as no one could prove that lands that do not produce brandy could produce it later on. It is about the same if you decided that Cognac was not Cognac brandy, for I would say that you have to prove it. In my opinion all the names of the goods have been made up by the reputation and the traditions of the public, and of the countries, and we have only to make laws to enforce those traditions.

15385. Would you consider it necessary to make laws for the purpose?—Yes.

15386. You think that unless you do, the use of the word "Cognac" will be abused, and is being abused?—It is being abused. I am not certain that the laws will prevent it from being abused.

15387. But at all events the law, at least, is making an effort to remedy it?—Yes.

15388. The point which I particularly wished to bring out is that after all it is only one of a number of efforts in the same direction with regard to other foods?—Yes.

15389. It is a new system which cannot be expected to be perfect at once?—Yes, it is quite a new system.

15390. It is on its trial?—Yes. You started before us on that line.

15391. In 1875?—Yes.

15392. (*Chairman.*) As you have told us, you export a good deal of your Cognac to England?—Yes.

15393. And, therefore, it has to come across the Channel to Southampton, or whatever port it may be?—Yes.

15394. I suppose it comes in casks for the most part?—No, very little in cask.

15395. Does it come in bottles?—Yes, most of it comes in bottles, in cases.

15396. I suppose the bottles come in cases?—Yes.

15397. What labels do you put, either on the outside of the cases, or upon the bottles, to give notice to our Customs House officers what the commodity is?—We put our name, "Jas. Hennessy and Co.," Cognac, and on the bottles we put a label with our name.

15398. Do you mark the word "brandy" on it to meet the exigencies of our Customs?—No; we have not the word "Brandy" on it.

15399. But "Cognac" is known to be what we call brandy?—I think so.

15400. The Customs charge a rate of import duty?—Yes, they have never asked us what it meant.

15401. Because they knew?—Yes.

15402. So far as you are concerned, can you give us any further information in this way: supposing we made a rule that you were to put more on your cases, what could you put?—We could put "Brandy" if you obliged us to do it, but according to the French law we say it would be of no use. The word "Cognac" means at least Cognac brandy.

15403. That comes to nothing. As regards this country and France, your acquit or your label, call it what you will, is a protection between the producer, that is the distiller, and the merchant and the person to whom they sell?—Yes.

15404. Will you now trace that on. The person who must be protected is the ultimate consumer?—Yes.

15405. Have you any suggestion to offer to us how, either in your country or in another, if a man goes into a public-house, or, if he goes into a restaurant or an hotel bar and says: "Give me a glass of Cognac," is there any process, by acquit or label, by which you could place before the consumer the proof that he is getting what he asked for?—It is possible. It has been discussed and proposed already in France.

15406. Will you tell us what it is?—It is possible to a certain extent. The bottles could be shipped with a seal of the French Excise. It has been proposed, but it is very difficult to carry out. It would protect the consumer that you are talking of, or at least a few consumers who happened to be there when the bottle was opened, but it could not protect the others.

15407. I want to take you, as a matter of hypothesis, into a public-house. A man says: "Give me a glass of brandy." What is to be shown by way of proof to each and every one that your acquit in France has been carried out? How can you prove to the consumer who is drinking over the bar what it is that he is drinking?—You cannot prove it to him I think. Generally, in the old days, I will tell you what proved it, and what helped Cognac and my firm and some other firms to do very good business. It was the palate of the consumer.

15408. But if he does not like it he will not go there again?—No. Why the consumption of good brandy became so large in this country is because the people here knew something about brandy, and they expected to get brandy that was not absolutely pure from cognac, but they would not go to the wine merchant or to the publican if he did not put a lot of cognac brandy in the blend that he gave them. It is not against the British public that I am talking, but it is the same everywhere. In France you can go to a splendid dinner party, but you will generally get very bad brandy at the end of the dinner, and the public know nothing about it. In England practically they are very good in comparison with other countries; they know all about food, and get the very best food in the world, but in France they know nothing about it. You cannot help the consumers that do not want to be protected, and they are pleased with what they get.

15409. But will you assume that the man does want to be protected, and that he is a man who says, "I do not know much about brandy, but I want to be sure that I have Hennessy's brandy." Take the case of a man at Islington, in this country. Can you bring home proof to the man that he is getting your brandy?—We ought to be allowed to sell little bottles, by which we would protect more people, because the only man who is really protected is the man who buys the bottle. I think the British consumer would be quite satisfied that he gets cognac brandy if he gets Hennessy's brandy, but he must buy it by the bottle, and go home with it. That is the man I consider a good customer. I consider as a good customer the man who buys the bottle and takes it home with him—I do not mean that he should drink it in a day, or two days; but in the bars, unfortunately, we know that there is some refilling. I knew a case where in a restaurant a bottle belonging to me was refilled, although the barman did not get a penny more from me. He refilled it in the usual course of things like all the other bottles in his restaurant. This was in France.

15410. Even if a law was passed in your country and followed up here, that you should send out no brandy except with your name on a label on the bottle, and that we made a rule here that we should receive none in this country but with that label, and that bottle gets into the hands of the licensed victualler here—the whole point is that we are wishing to prevent fraud—if that man is fraudulent, what is to prevent him from taking one of your bottles and putting some inferior brandy into it, and selling it across the counter to persons who cannot tell the difference?—Do you mean refilling it and putting a new cork in?

15411. That is what Mr. Martell told us this morning did occur, and that he had taken legal proceedings here to prevent persons from putting false brandy into his bottle?—Re-corking has been done sometimes, but not in England. It is very seldom done. They refill the bottle from another bottle of the same brandy sometimes, and sometimes by mistake out of another brandy, or out of a cask, but they do not put corks in.

15412. I see what is in your mind. You do not wish it to be supposed that what is put in as brandy is not brandy. Will you take the case of a fraudulent publican whom we wish to check? If this fraudulent man chooses to put into your bottles which held good brandy cheap brandy, adulterated and injurious to health, what is to prevent him doing it, and then showing that bottle to his customer?—He must put a cork and a capsule on.

15413. But if the bottle is an open bottle—he does not open a bottle for each customer. A man comes in and the publican holds up a bottle. What is to prevent him doing it if he is fraudulent?—We cannot prevent him, but we can bring a law suit against him. We have won some of those law suits, and Mr. Martell has won some. We generally win them, but, of course, we cannot prevent that man, just as we cannot prevent a burglar coming into our warehouse.

15414. The case I put to you is one of fraud. If a man is fraudulent in selling goods he can be punished now. What I want to get from you is this: Is there any means of labelling or ear-marking it precisely in such cases?—The label means nothing after the bottle is opened, because we know that it is refilled. The only thing would be if you could have an absolute certainty of the analysis of the brandy. That is what people have been trying at both in France and England. In the judgment of Mr. Fordham he gave us a minimum of 80 per cent. of ethers. It has been discussed in my country, and the merchants in Cognac have proved that in some particular cases you can get brandies with a little less ethers—perhaps 75 per cent. Practically I consider that the average is very good, but we know that that does not mean anything, because one can put in artificial ethers.

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15415. What I want from you is this: In your practical and theoretical knowledge is there any labelling of the bottle which will be beneficial to prevent the consumer being defrauded?—In the public-house, do you mean?

15416. Yes, in brandy that is sold by the glass?—No, I cannot see how. You ask me what kind of label will protect the consumer?

15417. Yes, that class of consumer who drinks over the counter?—The label cannot interfere with the inside of the bottle. We admit that the outside is all right, but if the contents have been changed we cannot do anything.

15418. It is an injury to your trade as well as to the consumer?—Yes, and I cannot prevent it, but it is not done very often.

(Adjourned to to-morrow at 12 o'clock.)

THIRTIETH DAY,

Tuesday, 9th March, 1909.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

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Monsieur J. HENNESSY, re-called.

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15419. (*Dr. Adeney.*) I am not quite sure that I understood one or two points of the evidence you gave yesterday. Perhaps you will not mind my asking you a few questions upon them. You have described the acquit system under the French laws of 1872 and 1903, and the extent to which they can prevent mis-description?—Yes.

15420. I should like to inquire whether you think that that control will be largely extended and supplemented by the operation of the French Food Law of 1905, to which you referred yesterday, when the regulations which are being framed under it have been completed and have become regularly administered?—In my opinion, the acquit system was started merely to collect the revenue. It has been changed by the law of 1903 and 1907, and it will be, we hope, changed once more, and we hope that it will help the Pure Food Law to act. In my opinion, this is how it can act: Nowadays there are already prosecutions according to the law of 1905. Supposing a merchant or publican or a restaurant keeper is selling or offering for sale or retailing brandy under the name of "Cognac brandy." On the complaint of an agent of the Government or of the Syndicate or on the complaint of a customer to the Commissioner of Police, an objection is raised against the quality of the so-called Cognac brandy the man is selling. Then, according to the Pure Food Law, samples are taken and analyses have to be made and tasting has to be done by experts. But then the man says: "I have been selling brandy that I bought as Cognac brandy; it was invoiced to me as Cognac brandy by Mr. So-and-So." If he can prove that the brandy sold—for instance, if it is a case of a bottle corked and sealed, and he can prove that he sold the brandy as it was when he got it from Mr. So-and-So, a brandy merchant or a Cognac brandy merchant, of course, he will have the right to say before the courts: "If a mistake has been made or a fraud has been committed I am not responsible;" it is the man who sold it to me who is responsible. Therefore the law will turn round towards the merchant, and say: "We object to the brandy sold by the retailer; he says you are responsible for it; can you demonstrate that it is what you pretended to sell—Cognac brandy?" In that case the rules are the same. The man will have the right to ask for experts both in tasting and analysis, but in that case he will have a very easy answer if he has bought nothing and got nothing into his premises but brandies with the certificate from the Excise guaranteeing those brandies are Cognac brandies—he will have a very good answer to the people who complain of the quality of his brandy, and he will get out of any complaint made against him. Of course, those laws have not been made only to protect the consumer, but also to protect the producer and wine grower, and we think that if they are carried out completely there will be some use in them. In fact, there is already, as I said myself to the Minister of Agriculture, because a good many firms have had to alter their labels. A few months ago they sold bottles on which "Cognac" was written, and they have had to scratch out "Cognac." If you go into a shop in Paris—a small public-house where they retail cheap stuff—and you ask for Cognac,

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they will generally tell you: "We have got something much better; we do not advise you to drink Cognac." But if you insist, and say: "I will have Cognac," they will either say: "We do not keep Cognac, because it is too expensive for our kind of business," or they will give you Cognac which will probably be Cognac or very nearly Cognac, because they do not dare to sell under the name of "Cognac" what is certainly spurious stuff. They are afraid of being caught and, in fact, they have been already.

15421. Then I may take it that you consider the Food Law of 1905, when fully administered, will be completely supplementary to the permit or the acquit system in protecting both the consumer and the producer against mis-description?—I think the acquit system will help the Pure Food Law.

15422. And the two will supplement each other?—Yes, because the acquit cannot go as far as the public. The Pure Food Law can only protect the consumer, and the acquit system is only to enable the legitimate intermediate trader to know what he is doing.

15423. Will you listen carefully to this question? I should like to put this to you: do you think that the operation of this 1905 law, if wisely administered, will tend to keep up the standard of the best quality of spirits on the one hand, and on the other hand tend to the production of wholesome spirits, though of inferior quality, when cheapness is a primary consideration? Do you understand my question?—Yes. I think on the first point there is no doubt that it will help a member of the public to get good brandy, for instance, or good spirit when he knows something about it himself. When he asks, for instance, for Cognac brandy, or claret wine, or champagne wine, he does not agree to accept either what we call vin rouge, red wine, instead of claret, or eau-de-vie instead of Cognac brandy.

15424. It will encourage the producer to keep up the best qualities?—It will encourage the producer and the retailer.

15425. And also it would give encouragement to the production of a wholesome spirit for the poorer consumers?—Yes. But that falls under the hygiene laws. You had no right even before that law to sell something that is considered to be harmful to the public health. It is done because the people do not complain.

15426. But you have in your department that is concerned in pressing the Food Law a department which would concern itself about the wholesomeness or otherwise?—Yes, the Board of Hygiene we call them.

15427. That department did not exist before?—There were those tremendous cases with regard to the Army and the supply of meat to them and other things, with regard to which people have been condemned to very heavy fines and to imprisonment, because they sold to the Army bad meat or bad hay, and so forth. That law is made not only for brandy. We started it for butter, to stop the mixture of butter and margarine. The mixture of brandy and spirit is exactly the same thing as the mixture of butter and margerine. A shopkeeper is not allowed to sell at the same time butter and margarine. We would like to come to the same thing and to say a shopkeeper is not allowed to sell at the same time grape brandy, Cognac brandy, and grain spirit. Although it is not Cognac brandy, we do not pretend it is bad for the health. The spirits that are bad for the health are the grain spirits that are badly distilled. They exist, and they are sold very cheap in the suburbs and places like that. Most of the liqueurs are made with grain spirit. We consider that whiskey is nothing else but a grain spirit, but we do not pretend that whiskey is poison.

15428. I do not think I need ask you any further questions on that, because you have made it quite clear. I want to pass on to another remark which you made yesterday. You said that if a purchaser in this country wants to be sure of getting Hennessy's Cognac brandy he must buy the whole bottle?—That is not exactly what I meant. I said I have two kinds of customers, because very few customers buy casks.

15429. I am speaking now of the bottled brandy?—Yes, but a private man could buy a cask. If he asked me my opinion I always would tell him, "Do not buy a cask of brandy but buy a few bottles at a time, because you will never keep brandy carefully enough in a cask; leave it to the people whose business it is." But the bottles of brandy we sell, for instance, are sold by grocers to people who buy two or three bottles of brandy; they have them sent home or they take them home and use them in case of need, and very often, I must say, when they are ill or have influenza, or things like that, in that case they get exactly what we ship; but in the case of the brandy that is retailed over the counter of a public-house, although I know perfectly well that the re-filling does not take place as much in England as it does in many other countries—for instance, in the South of France, a consumer sitting in a public-house or a restaurant would not allow the servant to bring him a bottle if it was not quite full. The result is this, that they have to re-fill the bottle. Sometimes they re-fill it with the right stuff, but very often they re-fill it with other stuff. In England that is not the fashion, and people never insist on having a full bottle presented to them, and therefore I feel perfectly convinced that in many instances the bottles are not re-filled. But it does take place. We have proofs of it, and in some countries like Australia the Government take it up themselves—the police take it up. They have one or two inspectors who go into the bar and ask for a glass of Hennessy's brandy, or somebody's brandy, or whatever kind of brand they like to ask for, and they know enough about it, and in most cases it is very easy because the people do not re-fill with very good brandy. I have told you already we do not pretend to have any secret about brandy, and, no doubt, if a man re-filled our bottles with brandy that is just as good as ours, which he could do because he could buy it, we could not find it out. But they generally re-fill the bottle with very poor stuff, and it does not require a very great knowledge to find out that the bottle has been re-filled. In Melbourne the police and the Board of Health carry that out themselves and they fine the publicans who re-fill.

15430. I think you have had cases here in this country where you have proved that your bottles have been refilled with brandy not your own?—Yes.

15431. What is the nature of the evidence that you have relied upon for proving your charges?—The evidence we believe in is tasting. In many cases we are helped because they re-fill the bottles with spirit at a different strength and a different colour. In some cases we have had to give evidence through an analyst. We did not ask for it, but the court named experts. Most of the people who are in the brandy trade do not believe in analysis at all. I quite agree that great progress can be made still in the analysis of spirits, but until the chemists find a special liquid or ether of some kind that is in Cognac brandy or, for instance, in grape brandy, if it is not possible to go as far as to distinguish Cognac brandy, and which is contained in no other spirit, it will be very difficult for us to depend absolutely on analysis. But we think our experience of it is that tasting and analysis follow one another very closely. For instance, take our brandies. We do not analyse them; we never analyse a parcel of brandy when we buy it. We never analyse a blend of brandy when we make it; we know nothing about analysis. We do it all on tasting, and the result is that the analysis for our brandies is generally very regular, which shows that our tongues and our palates are pretty good chemists themselves.

15432. Have you had any evidence of that?—We have always had experience of that.

15433. As between the taste and the analysis?—Yes. We have never analysed for our own evidence, but whenever our own brandies have been analysed we have always found them giving the same returns, and the point is this, that what we want to do when we sell Three Star brandy, for instance, is to sell always exactly the same brandy, and therefore we try and make a blend to follow the blend that was used before it, and to find the blend that will follow it, and we try to have brandies having the same taste, the same age, and all the same qualities. We know more than our customers generally, and if we find the brandy is as good as the other, it is quite natural that the chemist would find it too, because the test of the brandy can only depend on the materials that are contained in it.

15434. In other words, uniformity of taste means uniformity of composition, broadly speaking?—By experience I believe it, but it is only by experience that I believe it.

15435. I would like to pass on to your methods of stock-taking, in so far as you are required to meet the

Régie. The spirits, as they are produced, are stored into casks or vats, are they not?—Yes.

15436. Are those casks or vats marked in any way by the Excise?—No.

15437. And they are kept at the distillers' option in warehouses?—Yes.

15438. Are those warehouses in any way secured by Régie officers?—No. It is not like it is in England.

15439. It is quite open?—Yes.

15440. As regards your stock account. I understand that a stock account is kept of the spirits brought into stock and of those sent out?—Yes, since the new law of 1903. In olden days we had only to keep an account of the pure alcohol. All the entrances and sortie would be accounted for in pure alcohol, but since the law of 1903, and to try and keep a more accurate account of the various kinds of spirits that are stocked in the country, you must now give the pure alcohol and the quantity and strength so that you are responsible towards the Régie not only for the quantity of pure alcohol—that is the Revenue interest in the question—but also for the quantity and strength of each parcel.

15441. I believe your distiller does not pay duty on removing any spirit from his stock?—No.

15442. That is paid by the purchaser, is it not?—The duty is only due when the brandy is to be consumed. If you buy brandy, and you live in a town with an Octroi, then you have to settle at the entrance of the town the Revenue taxes and the Octroi taxes. If you live in a town where there is no Octroi the merchant can settle the Revenue taxes when the brandies leave his place, and instead of sending them with an acquit he sends them with what we call a *congé*, which means a receipt of the Excise that those brandies have paid the duty.

15443. With the removal of the spirit, you have to obtain an acquit from the Régie?—An acquit or *congé*.

15444. And that accompanies the spirit?—Yes.

15445. What does the acquit exactly cover? Supposing, for instance, the spirit is removed in several casks, are the casks separately marked or are they totalled up in bulk?—They have to give the quantity in each cask. The farmers get into trouble about that very often. They have to give the weight of the cask empty and full, and the quantity of pure alcohol it makes, which, of course, they can get at by multiplication. That is pretty easy.

15446. Is that accurately measured, or is that gauged in any way?—The cask is weighed empty and full.

15447. And the strength of the spirit is given?—Yes.

15448. But the casks separately are not outwardly marked in any way by the Régie officer?—No. The carrier who goes along with the cart has got the description of the casks on his acquit, and then some Excise officers go about the country, and if they meet a cart with casks, or if it has got hay or manure, they say: "We will just see if you have brandy under your manure or under your hay." Then they say: "Where is your acquit?" Of course, they have got the acquit, and then they go into the details of one cask and see if the brandy is accurate. We have Excise officers in towns and villages, and we have got what we call flying brigades—those are the people who go about the country, without having any special office, to try and find out the people who defraud the Excise or Revenue.

15449. What we call inspectors?—We call them flying brigades; they go from one place to another. They have two kinds of Excise officers—those who remain in their office and those who go about. Those who remain in their offices inspect. They have a certain number of merchants and distillers under their inspection, and the other people who go about can go anywhere they like. They have not got their own district to look after, but they go from one district to another.

15450. Their visits are surprise visits?—Yes. It is done pretty well, and they are very honest. There is very little leakage. It happens once in a few years that there are cases where an Excise officer has been bought, but I expect that happens everywhere. It is very rare. They are pretty honest people.

15451. When does the distiller or the merchant make his return to the Régie of his stock and dealings? Is that done annually?—The distillers must be divided into two classes—there is the man who distils only the wine he produces on his own ground. When he has finished his distillation he advises the Excise officers, who come and measure the quantity of brandy he has made, and they keep an account of it, and once a year they go to him, and they say: "Where is your brandy?" "Well," he will say, "I have sent so much with the acquit." The acquit credits him with a certain amount of brandy, and the amount remaining must be in conformity with the Excise book. The Excise is not very strict with farmers, but the wine cannot be removed without an acquit, and if some wine from one farm is brought to another farm the owner of the latter becomes a distiller and has to get a licence. Distillers have got three books, and they have to enter all the wine they distil. They enter all their operations. They have to make entries whenever they put wine into the still and whenever they put brouillis, and they must be accurate. While they are distilling—it depends whether they are people whom the Excise trust very much—they leave them pretty quiet, but when they do not trust them very much they call at any time of the day or night, and they say: "Stop all operations," and they take the books and the quantity of wine remaining, and the quantity of brandy made, and the quantity of brouillis, the produce of the first distillation, and they calculate it, and the books must be correct. You have no right to make a mistake with the Excise—that is what I am always telling my constituents, because they say: "I did not try to defraud." I say: "You must not make a mistake," and, in fact, you get very heavy fines if you do make a mistake. Those men are under the surveillance of the Excise, and they sell their brandy to merchants, but even when they have got very little left the Excise can turn up in their premises whenever they like as at ordinary spirit merchants and check the differences. They are allowed a certain quantity for evaporation, but they are not allowed to have either less or more. The fine is the same if you have got too much, because too much will probably mean that there has been a fault somewhere.

15452. What percentage is allowed by the Excise for loss?—I think 7 per cent. or 5 per cent.

15453. With regard to the farmers who distil themselves, has the Régie officer any means of checking the quantity of spirit produced with the possible yield of the materials employed?—Yes, very often, if a farmer does not know how to do it he asks the Excise officer to do it himself He would say: "This is the quantity of wine I want to distil," only we do not want to oblige the farmers, who are very poor, to go into all the details of the thing. They say: "This is the wine I want to distil," and the Excise officer says: "I will take it as about so much wine," and he tries to find the alcoholic degree of the wine, and he will say: "You ought to get about so much brandy." When the distillation is finished, if the man sells any during the whole distillation of the crop, he has got to take an acquit, and then he has to make an accurate acquit, and at the end of the operation the Excise officer comes and says: "What has been the result of your distilling?" The farmer says: "You told me I would have 10½ hectolitres of brandy, and this is what I have got." He may say 10¾ or 10¼—there has been a little difference, but they get accurate figures. The professional distiller is not allowed to make mistakes like that, and that is where the difference lies.

15454. I see the possibility of some little difficulty with the farmer who distils himself, so far as the spirit he is allowed to use for his own family purposes is concerned. How is that dealt with by the Régie?—He is allowed to use a certain quantity.

15455. Is he limited in the quantity?—Yes; he has so many litres of pure alcohol for each member of the family during the year, so he puts it down with each operation. That is not meant for our country, and it does not work in our country, because the people distil their brandies to sell them; they do not consume any. That is meant for the very large countries in France where the people gather a few prunes, for instance, or make even a little quantity of cider, and they distil merely for their own consumption. I think, myself, it would be a very good thing if they were prevented

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from doing it, but it raises such a hue and cry in most parts of the country that Members of Parliament do not dare to enforce it. In 1903 what they call the privilege "des bouilleurs de cru" was suppressed. Nobody in France had the right to distil without having the Excise coming, and, in fact, putting the spirit made under the knowledge of the Excise, and then the people were allowed to distil and obtain the guarantee of the Excise. But it did not last long, it only lasted three years, and after three years they came back to the privilege, and now every man is entitled to distil in France his own produce without the Excise coming in to see what he is doing as long as he does not buy anything else. But our farmers do not enjoy that privilege because, although they could distil without falling under the law, they would not get the certificate of origin. They have to remain under the supervision of the Excise, as before, to get the guarantee they require.

15456. Is the professional distiller allowed any alcohol for his employés free from duty?—No, he is not allowed anything. That is quite different, but practically he is allowed for evaporation, and that is all the employés can drink, and it is quite sufficient.

15457. With regard to stocktaking, when we were in Cognac we saw immense stores, running into millions of proof gallons. How is that dealt with by the Régie officer? Does he accept the statement of the merchant, or has he any means of checking it?—He has all the means of checking he likes, but, generally, he accepts our figures. I can only speak for myself and the firms who hold very large stocks. When they hold small stocks the Excise people go in and take stock. When there are very large stocks it would be a bit difficult. We have to take our stock once every year. We take it as accurately as we can, because it is our interest and the Excise do it with us. They know we have no interest whatever to cheat them. We never make use of the evaporation we are allowed, because the quantity of new brandy we keep is only a proportion of our stock, and the evaporation is much smaller on matured brandy, so that every year, when we give our figures to the Excise, the Excise say, "You have got so many hectolitres of brandy, and you ought to have so many." We have always more, so we start with a new figure, that is always bigger than the figure we ought to have. We would not be allowed to have more than the evaporation. For instance, suppose a merchant's stock on the 1st January is 100 hectolitres and the brandies sold and bought during the year have left the average the same, on the 31st December the merchant is only responsible for 93 hectolitres. The Excise take on his stock as it is between 93 and 100, within the limits of evaporation. He would be fined for 90 or 103.

15458. I have been asking you these questions because I recognise you have had very great experience, not only as a spirit merchant and distiller, but in the food laws of your country. Perhaps I may ask you for the same reason, about the various types of stills that are used in France. I gather, in the Charente district, it is practically the old type?—Yes.

15459. And the only modification used is the au premier jet?—Yes, but it is used very seldom, and not in the good districts. What we call the coarse districts near the sea and the islands, where they make brandies with an earthy taste—terroir—but it is very seldom used.

15460. It is not used in the best wines?—Not in the Charente at all. We use a very old pot still. I know, myself, why we do not use any other, because we have never found a better one, but it may happen that we would find a better one one day.

15461. It is the simplest of all stills, I believe?—It is as simple as a kettle.

15462. In other wine-producing districts in France more complicated stills are used, are they not?—Yes, in the South of France now lately, because their brandies have got a very soily taste, and they try to take off that soily taste.

15463. And the more soily the taste the more rectification that is required?—Yes, to take off the soily taste.

15464. Has that been the cause of the introduction of these more highly-rectifying stills?—Oh, yes; but also because in the South of France they used to make brandies very often of bad wines.

15465. Sick wines?—Yes.

15466. That is another reason for the use of those stills?—Yes, and then they want to do it cheaper. They cannot afford to do it in the other way. It is not a very expensive process, but is is very slow. We do it as slowly as we can, in fact, and the farmers who do make the best brandy are those who do it with the more patience, and so industrially it is not very convenient, and what they want to get in the South of France is large quantities of indifferent wine changed into brandy as quickly and as cheaply as possible, and they have started distilleries. But most of the stills used in France are, on the other side, very bad stills, because in all those countries where they distil for the consumption of the people the fruits are distilled by little stills that go about from one place to another on a cart, and they distil very bad spirit and very unwholesome spirit in most cases, and the people take it in and drink it themselves. They do not sell it, and they cannot sell it.

15467. Under what acquit is marc brandy removed?—The white acquit.

15468. Are marc brandies very good?—They have got a very soily taste. They make them in Burgundy with the refuse of the Burgundy wines. Some people are very fond of them, but they have a very soily taste.

15469. In blending the brandies from the different districts of the Charente, what is the object of doing that? What I really want to get at is this, is the flavour of the brandy from any one district too strong for the public taste?—No. Our opinion is this, that a good blend is Grande Champagne. The district of the Grande Champagne gives the best brandy certainly, but parts of the Little Champagne give brandies that have really more flavour than the Grande Champagne. The Borderies are about the average of a good blend of Cognac brandies, and we put a certain amount of brandy from the Bois district, which is not quite as good, but it matures faster. Grande Champagne kept alone does not mature as fast. Brandies of the Grande Champagne are distilled rather higher.

15470. Do you mean higher alcoholic strength?—Yes, although they are the best brandies and have the less soily taste. It looks as if they ought to be distilled at a lower grade of alcohol. The custom is that they are distilled stronger.

15471. So that your object in blending is really to get the best average flavour?—It is to have a good brandy and to decrease the price. If it was all Champagne brandy we should pay a little more for it, but there is very little difference between the price as it is, now that the wine is plentiful in the best districts. Some years ago they were very scarce, but now that the Champagne district and the chalky soil is replanted, we get as much brandy as we need from the best districts.

15472. As regards the influence of age, I asked M. Martell the question, and he informed me that it was entirely a question of flavour. Does your experience support that opinion with regard to ageing?—I think it is the evaporation of the alcohol extracts that one can notice, because the strength of the brandy diminishes. The quantity of brandy is reduced.

15473. With the reduction of the strength of the brandy, do not the secondary products increase in greater proportion?—That is what I was going to say—the alcoholic strength decreases and the quantity decreases—in our country, at least, because it is not true absolutely in this country. I will tell you why later on. But the quantity is reduced very much. I have got a cask I know of—a puncheon of 1865—and the contents would not fill a hogshead now. Therefore the principles in the brandy that do not evaporate occupy a bigger percentage of the whole quantity after 20, 30 or 40 years, than they did at the beginning. There is no doubt about that.

15474. You do not think they increase at all other than by concentration?—I know that it is a theory that there is a kind of oxidisation of the brandy.

15475. Do you consider the only advantage of ageing is the production of flavours? Do you impart any other property to the brandy?—I think that if there is some good thing in brandy from the point of view of health—and there is certainly, because we all know of people who have picked up wonderfully by taking small amounts of brandy——

15476. (*Chairman.*) Kept alive by it?—Yes, especially when they were not spirit drinkers before they started their illness—there is no doubt that when the

brandy is well matured and old, the percentage of those ethers, or whatever we like to call them, is bigger. Whether it is only by concentration, or because of the quantity of secondary products I do not know. It could be found out. There is no proof of it. They increase, but the reason of the increase is difficult to give. It could be found out on this side, because when the brandies are kept in very damp places—especially in Leith, where there are very damp bonds—the quantity does not decrease simply because the steam in the air works its way through the wood and the alcoholic strength goes down a lot, but the quantity of the brandy keeps up. I do not know if those brandies have been analysed in comparison with brandies kept in a dry place, but it could be found out in that way. In my country we always keep them as dry as possible. We lose in quantity and strength, but we think they mature better.

15477. What I wanted to get from you was whether, in your opinion, there were any added medicinal properties of old brandy as the result of ageing?—Yes, but is it because the same properties of younger brandy have been concentrated, or is it because a bigger proportion of those products has been chemically composed in the brandy? I do not know.

15478. You have no evidence to offer on that point?—No. I think myself it is concentration.

15479. You have heard of the ether standard in this country?—Yes.

15480. Do you agree with that as a standard for Cognac brandy?—I told you yesterday it is, in my opinion, a minimum average. I know it has been discussed a lot and I have seen new brandies distilled in some parts of the country when grapes were perfectly ripe which give a little below the figure of 80, but very little below, and only in very few cases.

15481. In your own trade now do you take any precaution to see that your ethers are up to the standard?—None whatever.

15482. You send it to this country just as usual?—We say we are certain it is brandy, and if you do not find it is brandy so much the worse for you. We never analyse.

15483. (*Dr. Cushny.*) Under this new law you are going to make a completely new class of brandies, I understand—the Cognac brandies?—Yes.

15484. Has the ordinary merchant to have a special chai for those brandies?—If he wants to enjoy the guarantee.

15485. If he wants the guarantee for brandy as coming from Cognac he has to have a special chai?—Yes, the Excise would not give it unless he had. He would get into his bond brandy with a certain acquit—for instance, the acquit eau-de-vie de vin Cognac, but he could not get it out with the same unless he satisfied the Excise that no other brandy had been introduced in the same bond.

15486. Does that chai mean a special building, or is it a part of the chai that he at present uses for his eau-de-vie de vin?—There is no law. Now you cannot keep eau-de-vie de vin and grain spirit, but they must be in a special building. I should like the same thing to be carried out for Cognac brandy, but I do not know if we will succeed, because, as I explained yesterday, the fact that one of the parts of the law of 1905 would be carried out that the district of Cognac will be delimited will enable us without a new law to get those acquits eau-de-vie de vin Cognac, but we will not be able without a new law to oblige the merchant to keep them in separate buildings, only they will not get the acquit Cognac if they do not put them in. They would have to have a special building, because the Excise will not give them, but they will give them an acquit blanc.

15487. Unless they have a special building?—They will have to have a special building.

15488. How many buildings are you going to insist on the merchant keeping?—That is the difficulty of it. As I said yesterday, we only want two buildings. The difficulty now is because we have got acquit blanc for wine, acquit blanc vin Cognac, and acquit soixante-douze, but my system is very revolutionary. In the district of Cognac and in all districts delimited you are entitled to have a stock under the white certificate and to increase the quantity of it with the spirit under the white certificate produced in this district, but brandy of another district cannot come into another district and keep its quality. You understand what I mean.

15489. Yes?—There is no reason for a brandy to go from one district to another. My principle is this: The law cannot work; you must not ask too much of the law and you cannot expect the acquit to follow brandy as far as the consumer. The only thing that you can expect the law to provide for is that when brandy is shipped from Cognac as Cognac brandy it must be Cognac brandy. We cannot ship from Cognac grape brandy, because grape brandy must not be shipped from Cognac. The point is this: You can ship grape brandy from Marseilles; it does not give you any idea that it is Cognac brandy, but if you ship grape brandy from Cognac you rather look as if you pretended to ship Cognac grape brandy.

15490. Why should not a merchant in Cognac buy the South of France brandy and ship it from Cognac?—As what?

15491. As eau-de-vie de vin?—He can do it now. I think it is a mistake, but he can do it. As long as he puts "eau-de-vie de vin" on his casks or bottles he can do it.

15492. Would you be able to convict the man of doing that? What evidence would you bring?—If he does not sell it as Cognac you cannot convict him.

15493. But if he exports it from Cognac as Cognac could you convict him?—There have been cases already; there was one a fortnight ago.

15494. What sort of evidence is brought?—Purely taste. The tasting is enough generally for the man to give in and not to fight the case. He admits it. There is the price and the taste and probably a certain amount of analysis and the man does not fight.

15495. Suppose he blends and adds a little Cognac brandy?—If he adds a little Cognac brandy; if he adds more, when you come to percentage no tasting and no analysis can detect the difference if the amount of eau-de-vie de vin is very small in comparison with Cognac brandy.

15496. Could you in fact detect 50 per cent.—half of it Cognac brandy and half of it from other places?—We should only be too pleased if they would put 50 per cent. of Cognac brandy and the farmers would too.

15497. You mean they do issue blends with less than 50 per cent. Cognac brandy?—A lot is sold as eau-de-vie de vin and I do not expect there is much Cognac brandy in it.

15498. But supposing it is sold as Cognac?—If it is sold as Cognac, I mean now since the new law, if it is not Cognac brandy it is very near Cognac brandy. They would not risk it nowadays—I do not know what will happen later.

15499. What evidence would you have? Supposing a man mixed the eau-de-vie de vin with 50 per cent. of Cognac and sold it as Cognac, what evidence would you have that he was doing that?—Nowadays not much, but in future we will have the evidence as I was telling Dr. Adeney at the beginning. There is a complaint. I am a customer and I complain that the brandy sold to me as Cognac is, in my opinion, not Cognac.

15500. You judge from the taste?—Yes, from the taste. After all, if it tastes a very good brandy there is all reason for me to think that it is very good brandy. It is only by the taste that I can find it or at least that my attention is called to it. I complain. The Pure Food Service will take up the case and go for the retailer. The retailer will say: "I have bought that brandy from Mr. So-and-so, and Mr. So-and-so is responsible."

15501. What evidence does the retailer give that he bought this particular brandy from Mr. So-and-so?—If it is in a bottle it is all right.

15502. But the bottle has been opened. How does the retailer prove that what was in the bottle was bought from Mr. So-and-So?—If the bottle is opened, of course it is very difficult.

15503. It must have been opened if the customer has had any?—But there is the man who buys a bottle. There is the grocer and the restaurant keeper. This is what happens. The retailer has a few bottles of brandy.

15504. (*Chairman*). And an invoice?—And an invoice. The consumer comes and complains. The re-

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tailer says: "I have given him what is in the bottle and the proof is that here is another bottle that is not uncorked." Of course the brandy that the man has drunk himself he cannot give up for analysis, but the thing to do is this. You have to go with an agent. He goes into a shop and asks for a glass of brandy. He says: "It is not very good," and seals the bottle half empty. The retailer says: "It is a bottle with a label; I have bought it from Mr. So-and-So, and here is another bottle of the same brandy uncorked." We consider that in most cases that will cover the responsibility of the retailer if the brandy found in the bottle that is half empty is the same that is in the bottle that is full. Then we go for the merchant. In many cases the bottles themselves have been filled by the retailer who has bought the Cognac, and then the retailer has to prove for instance that he has bought but one cask of brandy or two casks of brandy, and that the only two casks of brandy that he has got have come from such and such a firm, and if he can prove that, the merchant will be responsible for them.

15505. *(Dr. Cushny.)* But supposing this merchant has bought Cognac brandy not only from Cognac but from Marseilles?—Nowadays he cannot prove that he has bought brandy from Cognac.

15506. But in the future?—If he cannot prove he has bought brandy from the Cognac district he will have no way of proving that he has sold Cognac brandy, and he ought not to use the word "Cognac" on the invoice. But he does not use it.

15507. That practically reduces the sale of brandy in France, and those who sell Cognac brandy will not be able to sell anything else whatever?—The merchants will be allowed to sell anything they like as long as they do not call it Cognac.

15508. *(Chairman.)* If they properly describe it they can sell what they like?—Yes.

15509. *(Dr. Cushny.)* What I mean is, a merchant buys Cognac brandy, and he also buys Marseilles brandy: he cannot sell his Cognac brandy except as Marseilles brandy?—Yes—as eau-de-vie de vin, and he is encouraged to put a certain amount of Cognac brandy in it to make it better.

15510. But he cannot call it Cognac brandy?—He cannot call it Cognac brandy. He ought not to. If he does he is responsible to the law and he will not be able to do it.

15511. He will not be able to sell anything except Cognac brandy if he sells brandy as Cognac brandy?—He will not be able to buy anything but Cognac brandy. That is the point we want to come to, and we shall come to it.

15512. Of course you are not interested in the adulteration of eau-de-vie de vin, but that goes on to a considerable extent with grain spirit?—Yes, and I think up to a certain extent they add others to it.

15513. And it is sold as eau-de-vie de vin?—Yes, but the eau-de-vie de vin is well protected now by the Excise. The man who sells eau-de-vie de vin and who has mixed it with grain spirit (it is done I quite admit now and there will be more cases probably but in most cases they cannot fight it) has got to submit to the fines. When he has been fined enough he will give it up. He will have no interest in it because the difference in price will be smaller and smaller. With the immense product of the wine in France the difference in price is not very big.

15514. Are there any people in France who admit that they sell a mixture—that they blend eau-de-vie de vin with grain spirit?—Yes.

15515. They admit it?—Oh, yes, lately.

15516. There is no standard set as to how much eau-de-vie de vin shall be present? It is not determined when there is a limit to the amount of grain spirit added to the eau-de-vie de vin?—No.

15517. So there is no necessity for detecting how much grain is added?—No. We have made it a rule that what they call eau-de-vie fine ought to be 50 per cent. of eau-de-vie de vin, but the 50 per cent. cannot be enforced.

15518. You cannot detect whether it is 50 per cent. or 75 per cent?—No.

15518*a*. Returning for a moment to my previous question, do you contemplate this new law setting up a new set of merchants of brandy who will only sell Cognac in France?—No, I think there are ordinary merchants who sell nothing but Cognac brandy. The only thing I want is to prevent anybody from being able to sell spirit called Cognac brandy if it is not Cognac brandy. That is the only thing we are trying to get at.

15519. But I understand your idea is that you will finally get a sort of chain of people who lead from the Cognac distiller practically to the customer who only sell this Cognac spirit?—Oh, no. Restaurants and public-houses will always sell goods of various prices and various qualities. We cannot get a butter shop like the shop you are thinking of. It has often been talked of—a restaurant or public-house which would sell nothing but Cognac brandy. Take the man who sells butter. He is not allowed to sell margarine. That could not answer.

15520. But the man who sells to the restaurant keeper must sell only Cognac brandy?—Oh no, he can sell anything he likes.

15521. *(Dr. G. S. Buchanan.)* He takes it from one particular place—that is all you mean—if he keeps Cognac apart?—Yes. What I have been telling you is that the acquit and the Excise law cannot go as far as the consumer. The only thing they can guarantee is that the intermediate merchant gets Cognac brandy himself, for instance, in this country. The buyer gets Cognac brandy; that we do guarantee, but what he does with it afterwards we cannot guarantee, and nobody can guarantee.

15522. But at the same time you think that some substantial check can be afforded by the agents, the samplers or other people who act under the law against fraud in seeing when they buy brandy it is described as eau-de-vie de vin or as Cognac, as the case may be, correctly?—I do not quite follow.

15523. Your point is that although the acquits do not reach the consumer, the acquits are a means by which the merchant or the retailer may be certain of the origin of what he has got?—Yes, the retailer or the intermediate man.

15524. *(Chairman.)* The intermediate man or the merchant?—Yes, my lord.

15525. *(Dr. G. S. Buchanan.)* Then when you come to the retailer you have to depend upon your agents, and so forth.—Yes.

15526. And their proceeding is necessarily a detective system—they cannot attempt to control every drop that has come from one place or another, or to safeguard it?—Oh, no.

15527. But they are in a position to demand from the man who sells the brandy as Cognac what are his proofs that this is Cognac, how it is sold to him, and so forth?—It is not exactly that. They have not got the right to ask him what is the proof that it is Cognac. They have got to go to him and say: "We think it is not Cognac." and prove it is not.

15528. *(Dr. Bradford.)* Have you any knowledge as to whether these mixtures of grain spirit and eau-de-vie de vin are particularly prejudicial?—When they are not too cheap I do not know if they are very bad for the health of an ordinary man. We think they are bad when they are used for brandy in the case of a sick person, for instance, who uses brandy. We were explaining a moment ago how the brandy used for medicinal purposes ought to be old and well matured, to have all the properties that we try to get into real brandy. There is no doubt that nobody keeps grain spirits to mature. The advantage that a sick man would get out of those spurious brandies is very small.

15529. You have no direct knowledge that they are prejudicial?—No. I would have to go into particular details. When they are made with bad spirit I think they are very bad for one's health, and when they come into very coarse brandies.

15530. What do you mean by bad spirit?—Grain spirit that is not re-distilled, that is not rectified. The curse of the brandy trade has been the good rectifying of the grain spirit, because in old days the grain spirit was badly rectified and bad. It was detected by its own taste.

15531. What is the evidence that these badly rectified spirits are harmful?—I have heard many theories

about that, and when I was at the Navy School the man who taught me physics said that it injured what he called the under part of the brain. He sent us out to see the workmen walking out—they were drunkards in that part of Brittany, Brest, because he said they used to stop and give a little shake with their head.

15532. That is a question of the consumption of crude and raw spirit?—Very low spirit, so he said.

15533. (*Chairman.*) You have stated very distinctly that you cannot expect the acquit to reach the consumer. Will you give me your reason for saying that?—What we call the acquit is a certificate of the Excise that accompanies the brandies until they have paid the duty. When the duty is paid you are in your own house—you have paid the duty for your brandies. When the duty is paid on your brandies you have the right to consume them in your own house, and nobody can interfere with it. If it is a public place where you are offered a drink the Excise says the Revenue taxes on the brandies have been paid for and there is no acquit left—there is no paper left.

15534–5. I am thinking of the rights of the consumer in a place of refreshment, as you may term it. Can you suggest practically any way by which you could protect that consumer so that you may bring to his knowledge the details of what he is drinking?—We have studied, and some members of Parliament of my country have studied, the idea of having on the cork of the bottle a stamp put on by the Excise, something like what they used to do in the docks in London through the supervision of the Customs in the old days. That could be done in fact, and it could be enforced. A man could have a cask, for instance, from Cognac and bottle it in his own bond under the supervision of the Excise, and for a small amount of money get the Excise to put a kind of seal on each bottle. But when the bottle is opened I do not see any way of guaranteeing that it has not been refilled unless we find an un-refillable bottle that we have been looking for for many years. It may be found, but it is very difficult.

15536. You say members of your Chamber have considered that, but have any practical steps been taken to create such a law that a consumer over the bar, as we call it, of a public-house here can be protected?—Up to now we have only made this law, that if you put "Cognac" on a bottle either as the name of the stuff or as the address of the man, the brandy contained in it must be Cognac, and if it is discussed you have to prove that it is Cognac brandy. We must see how it works. I do not say it works absolutely well, but it has worked already up to a certain extent, and if it does not work enough with the feelings and ideas of the French wine growers they will ask for something else, and then we should be prepared to consider the system of a stamp or seal of the Excise, but that would not bring us any further than the contents of the bottle, and when the bottle would be opened we should have no other guarantee than we have now, that is tasting the brandy and the complaint of the consumer or of the agent of the Government, if the brandy served as Cognac brandy does not taste like Cognac brandy. You see my point?

15537. Yes, I see your point, and it is very practical. At present I ask you if you imposed a law that the bottle must always have a label, and that the bottle should only contain that which the label represents, and it contains something else, of course that in itself is a fraud which our present laws can deal with, but it seems impossible to suggest that you should have a law that no publican shall ever put into that bottle anything else but what originally was in it. It is a free country and a man may do what he likes?—He has to take off the label.

15538. I suppose if he kept it on and chose to drink it in his family or drank it himself the whole fault would be the fraud?—But if he does not sell it he is entitled to do anything he likes with it.

15539. And if he does not represent to the consumer in terms that it is something that it is not there is no offence. If he does not represent to the consumer that it is that which is on the bottle?—For instance, a publican would take a bottle of Hennessy's brandy and empty the bottle and fill it with something, and simply on the condition that he would tell the consumer "This is not Hennessy's brandy," then the law could not touch him. If he said it very loudly. But do you believe he would say it very loudly?

15540. Suppose he says nothing, and the consumer goes in and says, "I want a glass of brandy," he may give what he likes as long as it is brandy?—Yes.

15541. Is it supposed we could say: "You shall not give him what you like as brandy, but you must give him Cognac or any other," and so limit the trade to a particular brandy, because that would be the result if you state that he must follow his bottle always?—I do not see that. When a bottle bears a label he has only to take off the label or scratch it out; it is very easy, but as long as it bears that label it gives the idea to the consumer that he is getting what the label represents.

15542. But another point is made by some persons. Do you think it would be advisable or advantageous if that very bottle out of which the brandy is sold should contain some label so as to show what it is. We are appealing to you almost as a law-giver now?—I think there are two ideas which I discussed yesterday. There is the first idea to say, whatever you sell to the public must be described as it is. The other idea is, whatever you sell to the public must not be misdescribed. On the first point I think every man agrees that nobody has any right to misdescribe a thing sold to the public. On the other hand, seeing that everything must be described as it is, I think myself it would be very good for everybody, both for all the legitimate trade and the consumers, and everybody, and I hope those International Congresses that take place now every year will come to that result, to oblige a man who sells something (I am not only talking of the man who consumes) to say what it is.

15543. That is, the retail seller to the consumer has to say what it is?—And the merchant to the retailer.

15544. Please keep the merchant out. We can deal with the merchant by the invoice. There is no difficulty there, but we are dealing with the difficulty of the retailer and the consumer. You say he ought to say what it is. In what shape would he say what it is?—By the label on the bottle.

15545. Of course, as you say, he may put something else in the bottle, but if the label was there your view would be that that is a guarantee that the bottle contains what the label represents? Is that so?—It is the duty of the retailer to see that the bottle contains what the label mentions.

15546. Be a little practical. We will take the consumer, if you please—the man in the public-house. The consumer would say: "Let me see the bottle that you are taking that brandy from:" and the retailer holds the bottle up to him. He cannot go any further—that is all he can do?—The consumer?

15547. No. The publican can hold up the bottle and say: "Here is the bottle with the label on, and you shall see me pour it out"?—What you say is very strong, but in many cases the man puts his hand on the label so that the consumer cannot see it.

15548. But I assume he is doing his duty, and that that is the law. You can only do that to this extent, I suppose, that if the consumer demanded to see the bottle he should have the right to see. You could not make it the duty of the publican always to show it to the consumer who did not wish to see it?—No.

15549. Can you go further than that?—I do not think so. I think the Government ought to protect the consumer, but the consumer ought to help.

15550. How is the Government to protect the consumer?—By preventing the retailer from giving him an article that is not what he asked for.

15551. That we have got in our country now, but this is as to the exhibition of the label?—We consider that England is one of the countries where trade of all kinds is best protected. There is no doubt of that. It is quite as bad to sell any grain spirit as Cognac brandy as it is to sell any brandy as Hennessy's brandy, or any whiskey as Walker's whiskey. It is the same thing. As long as you tell a man: "You think you are going to get this thing but I am putting in something else."

15552. We are agreed on that, and that is our law now, but I am asking whether practically you can suggest that an obligation can be placed on the person, whom we will call the public-house keeper, of displaying the label and the sign of what the article is as he

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sells it, which is generally the label on the bottle. To what extent should the obligation be placed upon him to display that to the consumer?—He would be obliged to give a name to what he is selling.

15553. That is to show the sign, or what we call the indicia of what it is he is selling?—That is because you will not give a definition of "brandy." A man comes in and asks for brandy. On the bottle the retailer will put "brandy." Will that be sufficient, do you think?

15554. I think that you have given a bad example. Supposing a man came in and said: "I want Cognac," and there is a bottle marked "Cognac." Would you make it a duty of the licensed victualler always to show that bottle to the consumer?—That is very difficult. Our law simply is that the consumer has the right to oblige the retailer to show him the bottle.

15555. It does say so?—Yes. If you ask for Cognac brandy according to our law now in France they bring you the bottle on which there is nothing. You say: "I do not want that, I want a bottle with 'Cognac' on it, because I want your guarantee that it is Cognac brandy."

15556. I know in France they produce the bottle, but is it a legal obligation that before the person there, the seller, gives his customer that glass of brandy he is bound by obligation to show the bottle?—No.

15557. It is only the practice?—He can give brandy out of a bottle that bears no label and say: "I guarantee it to be Cognac" if the consumer is satisfied with the guarantee of the retailer.

15558. That is the spoken word. That is sufficient?—Yes. He says: "I have got no bottle labelled 'Cognac,' but here is a bottle that contains Cognac brandy," and that will help the consumer. If the consumer is satisfied with the guarantee then it remains simply that he will go and complain if he thinks he did not get Cognac brandy.

15559. But supposing he is not satisfied with the guarantee, could he say to the publican, as we should call him: "I will not accept your guarantee, give me proof of the fact by producing a bottle marked 'Cognac.'" Can he say that by law?—No, not by law. He can say it by custom only. He can say: "I want it."

15560. (*Dr. G. S. Buchanan.*) If he is an agent of the Government he can of course ask for the bottle to see the label. He has the right to see the label?—But if there is no label? For instance, supposing a publican has got a cask at the back of his counter and he has a jug which he fills from the cask for brandy or anything else, then there is no label on the thing. There is a name on the cask but it may be rubbed out. The only thing is that the agent of the Government comes in and he does not ask for a bottle labelled "Cognac." He says: "Give me a glass of Cognac" and they give him a glass of something. He tastes it and he says: "Where is the bottle it came from; this brandy was served to me as Cognac; it may not be described as Cognac on the label, but it was served to me as Cognac," any consumer could do it with witnesses by swearing that a servant, a barman, came and helped him to a glass of so-called Cognac and it was not Cognac, and then the case proceeds. The agent does not want any witnesses.

15561. We have been speaking of the difficulty of checking the practice of giving a wrong spirit in the public-house by the glass, and Dr. Cushny has brought out the difficulty of tracing the thing back, but I understand from what you have told us already by the operation of the French law, at any rate, something has been done in that respect, and that there have been cases in which people have sold spirit which was not Cognac but contained grain spirit, as Cognac, in which they have been detected, and have been prosecuted, and that as a result when you go into a café now and ask for Cognac they may say they have not got Cognac; they may say "We will give you 'Fine,' but we will not give you Cognac"?—Yes, that is so.

15562. With all these imperfections and faults in the administration, something is being done?—Yes.

15563. (*Chairman.*) That is the same as our Food and Drugs Act?—The first thing that was very noticeable was that a good deal of spirits were sold as Cognac or Cognac de fantaisie, which were generally very poor spirit. No one dare put their name on it as the shipper or bottler. It was in bottles on which was written "Cognac" or "Cognac de fantaisie" or "Old Cognac." All those disappeared at once. When the consumer went into a shop and asked for Cognac he was always helped out of one of those bottles. All those labels disappeared, and when the consumer asks for Cognac now, in most cases, if they do not give him Cognac, they give him something that is not very far from real Cognac, because they are afraid of the cases they would have to fight.

15564. (*Dr. G. S. Buchanan.*) In that respect you have gone a little ahead of ourselves in this country under the Food and Drugs Act. We have a law, as you know, that the merchant must give under the Food and Drugs Act an article of the nature, substance and quality demanded, but our system of administration depends on a great many circumstances which make it extremely difficult to deal with a matter of that kind. For example, we have to be dependent upon an analyst's report, and we have no definition such as you have with regard to Eau-de-vie de vin de Cognac, and so forth, and therefore no mis-description can be proved while nobody knows what the words signify?—That is so.

15564*a*. (*Chairman.*) You ask for Cognac brandy, and you prove by calling a merchant in brandy that it is not Cognac brandy?—Who could go for him? If a man sells Hennessy's brandy and it is not Hennessy's brandy I would go for him, but if he sells Cognac brandy and it is not Cognac brandy, who can go for him?

15565. The consumer who pays an extra price, because he thought it was Cognac brandy, and he gets something that is not Cognac brandy?—The consumer?

15566. Yes, because he is the injured person?—Yes.

15566*a*. (*Dr. Adeney.*) You spoke just now of the Government being bound to give protection in order to protect the consumer from mis-description. Did you mean that the Government were bound to provide the machinery for detecting the mis-description as well as to pass the law?—In France it is done more to protect the producer than the consumer.

15567. You do not understand my question?—You asked whether, in my opinion, the Government ought to provide agents and the organisation to protect the consumer.

15568. Yes?—The Government keeps policemen to prevent the people from being robbed by burglars, and it is about the same thing. To what extent is the public ill-treated by the people who mis-describe things that they sell, and is it the duty of the Government to protect the people completely?

15569. (*Dr. G. S. Buchanan.*) I think, as a matter of fact, you have some evidence, have you not, that chemical analysis in connection with your standard brandies—the Three Star brandy, the One Star brandy, and so forth—shows that it is extraordinarily accurate in composition?—Yes.

15570. They are uniform?—Yes.

15571. That has been worked out in certain special cases for the guidance of your firm, and you have found it so?—Yes, for law-suits.

15572. And the analysis and the tasting in those cases have rather gone side by side, have they not?—I say this: My standard—the Three Star, for instance—I keep up merely by taste. If the analysis shows that it is very regular in composition I do not interfere with it myself, but my experience of analyses that have been made shows that the composition is very regular. I say, therefore, my tasting is quite good enough to give a very regular composition to the brandy, and I believe it is the fact absolutely. I think that tasting is the best way of detecting spurious brandy, and you practically never make mistakes, or when you make mistakes it is on points where a chemist would not know more than you do, because you can imitate the real true brandies with pure grain spirit by putting in them the chemical elements required, but you cannot give them the taste.

15573. (*Dr. Adeney.*) Have you ever known that to be done practically?—I am certain it has been done.

15574. But you could give us no proof of that, could you?—I have never seen it done, but I know perfectly

well it is done, because you see people who offer to sell you the elements, and I will tell you how it is done. They distil wines in some countries with rectifying apparatus that sends the spirit on one side—the wine spirit, if you like—and on the other side the ethers and aldehydes, and things like that. They have got stills to do it, and they have only got to add those aldehydes and ethers to grain spirit to have grape brandy to answer all the requirements of the chemist. I will not say that chemists will not find better ways of analysing the brandies—I hope so, myself, very much.

15575. (*Dr. G. S. Buchanan.*) I am not sure that you have got my point. I understand that in the case of your firm, for instance, you had in certain cases had a very careful determination of higher alcohols, ethers, acids, and so forth, and you had found that these had varied very little, and, as a matter of fact, your analytical data obtained in that way had been of very great service to you in detecting fraud?—Yes.

15576. And have been used in certain cases?—Yes.

15577. And have gone side by side, to some extent, with the experience of the taster?—Yes.

15578. (*Dr. Adeney.*) There are two questions which Mr. Guillemard, who regrets he is unable to be present with us to-day, wishes me to put to you. A distiller receives wine for distillation under an acquit setting forth that the wine has no sugar used in its manufacture. How does the Excise officer know whether this is the fact or not?—They are very strict about sugar. They know it very well—in fact they find often sugar where there is none. They watch. There is a duty on sugar. You have no interest to pay the duty and make wine with it. You must have the sugar free from duty to make it profitable. According to the laws now you are entitled, if you are a farmer, to a certain amount of sugar to put in your grapes to make wine with. It is the same principle as the spirit we were talking of a moment ago. You have a right to so many pounds according to the number of your family, but it is a very small amount, and the Excise knows that you are entitled to so much sugar if you ask for it. You must ask for it from the Excise, and the Excise have a right to see what you do with it, and they know that you have had sugar, but in my opinion a man now who would buy sugar would be known as buying sugar, and he could not sell his wine. There is no danger of it. It has been done to a large extent, but it is not done now. The best protection is the price of the sugar compared with the price of wine. It does not pay to do it.

15579. But does the Régie officer as a matter of fact go on the premises of the farmer and see for himself what becomes of the sugar if he has any, or that he has not got any if he has not got any?—Yes, if they found that a man had bought a certain amount of sugar they have a right to do it.

15580. The Régie officer only makes a special observation if his suspicions are aroused?—Yes, and they take their carts when they are going to the distilleries and take samples of the wine, and if those wines are found to contain sugar they are fined very heavily. I could guarantee it is not done in my country now. It has been done, but not now. It does not pay them. The wine is too cheap.

15581. An acquit blanc appears to be used for various kinds of spirits. If a merchant stores different kinds of Eau-de-vie in the same stores how can the Excise officer know whether the spirit for which he grants an acquit is Eau-de-vie de vin, or whether it may not be Eau-de-vie de marc, or some other kind of spirit which may be sent out under the acquit blanc?—They are not kept in different buildings; they are kept in the same buildings. They are kept under separate accounts in pure alcoholic strength, and qualities, and degrees of alcohol. It can be done. He has to ship one for the other, and the other for the first. It can be done, but the interest in it is not very big when it is only Eau-de-vie de marc, and only those kinds of brandies. It only comes in when there is Cognac brandy in it, because there is no interest in shipping Eau-de-vie de marc for Eau-de-vie de vin, or Eau-de-vie de vin for Eau-de-vie de marc. They test it and their value is about the same. It has been considered too difficult to have a chai for each kind, and then generally in the case of people who keep all those spirits, when the spirits leave their premises they leave with a congé. There are intermediate merchants, and they all go out by the same door with a congé. They are labelled, but it is only the label that follows them. As I have explained, the acquit disappears when the Excise duty was paid.

15582. Suppose the merchant in Cognac has all these different spirits, do you think it is possible to protect the Cognac brandy unless he has a completely separate chai to store it in?—No, he must have a separate chai. That is the only case that it is in his interest to replace grape brandy by another.

15583. (*Dr. G. S. Buchanan.*) Do you happen to know how many Excise officers there are in the town of Cognac?—No, but I could find it out for you easily.

15584. I think we were told there were about 80, or thereabouts. I wanted to bring out the fact that there was a considerable number of officers in the town itself?—Oh yes, they keep a lot, but as I explained to you they are not trained enough now to the idea that their duty is to look after both Revenue and pure food, but they are coming to it. The Minister of Finance is the head of the Excise and the Minister of Agriculture is the head of the other service, and so they have to meet. Dr. Roux, whom you saw, was the head of the Commission, but there were representatives of all the Ministers on it, and if we have someone to fight against it is the Minister of Commerce, because, of course, some of the merchants do not help very much, but the Excise is all right.

15585. The Excise and the Department of Agriculture work both together and co-operate?—Yes.

(*Chairman.*) I am sure you will be glad to hear that is all the Commissioners have to ask you. We have to thank you very much for the evidence you have given.

The witness withdrew.

Monsieur André Hine, called.

Mons. A. Hine.

15586. (*Dr. Bradford.*) What is the nature of your business?—Our business is in Jarnac, close to Cognac, and we ship Cognac brandies in casks and bottles, but more especially in wood.

15587. Is your firm mainly concerned with shipping?—We are shippers only.

15587*a*. Are you distillers also?—We distil also. We have distilleries of our own and buy from farmers and have agents distilling for us.

15588. Is your business confined entirely to Cognac brandy?—Oh, yes.

15589. You have no business with other varieties of brandy?—Not for England.

15590. But for other countries?—Very little.

15591. What do you understand by the term "Cognac brandy"?—Cognac brandy is the produce of the distillation of the wine of the Charentes district.

15592. Has that district been marked out yet?—Yes, quite lately, but not officially. It will be done in a few days.

15593. At the present time it is not accurately marked out?—It is not up to now, but it will be in a few days.

15594. What other varieties of brandy do you recognise besides Cognac brandy—I do not mean in your business, but what other varieties of brandy do you know of besides Cognac brandy?—There is brandy the product of the distillation of wine. I may say I do not know much about others.

15595. Have you any knowledge of brandy that is derived from grain spirit?—No.

15596. I do not mean in your business?—No, I know very little about it.

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15597. You cannot give us any information about it?—Oh, no. I would not be able to give anything certain.

15598. Do you think it would be to the advantage of the business of the Cognac merchants to have the Cognac brandy defined in the way in which it will be defined in the next few days as you say?—I think it will.

15599. Do you think it will assist if they store the Cognac brandy separately from the eau-de-vie de vin?—It is practically done now.

15600-1. Is it stored separately?—It is stored separately now in most cases.

15602. You store it in separate buildings?—Yes, as far as my firm is concerned.

15603. You have one chai for Cognac brandy and another for eau-de-vie de vin?—Yes, now, and we shall be obliged to do it as soon as Cognac is officially delimited. What we have got on the white permits of 1872 and the white permits with the certificate of origin is mostly Cognac brandy already.

15604. But you understand my question—I was speaking about the storing of it and the warehousing of it. Is it going to be kept in a separate warehouse?—I think it will be necessary to do so.

15605. But that has not been done as yet?—No, because Cognac is not delimited yet.

15606. I think you want to give some evidence as regards the ageing of brandy?—Yes.

15607. What are your views about that?—Our view is that it is not necessary at all to keep it in bond a certain amount of time. It is always a question of palate. When it is older it is more palatable and more agreeable than when it is young.

15608. Putting that aside, you do not think there is any necessity for bonding?—No.

15609. Do you think there is any reason to think that new brandy is injurious?—I do not think so.

15610. So that you only keep it on account of the improvement in flavour?—Yes.

15611. (*Dr. G. S. Buchanan.*) You have Cognac brandy that is Cognac brandy according to your definition in your warehouse?—Yes.

15612. That is the bulk of your business, is it not?—Yes.

15613. By far the largest part of your business is in pure Cognac brandies?—Yes.

15614. Then, in addition, you have some trade in the cheaper brandy which is a mixture of Cognac and eau-de-vie de vin?—Yes, it may happen occasionally.

15615. Have you also any trade in mixtures of Cognac or eau-de-vie de vin and industrial alcohol or grain spirit?—None at all.

15616. That is to say, you at present have nothing under the acquit rouge at all?—No.

15617. But under the acquit blanc you may have occasionally for some parts of your trade wine spirit other than Cognac?—Yes, we may.

15618. In future, if this regional acquit system comes in, it is probable that you would have to keep that mixed spirit differently from the Cognac in a different place from the other, or you may?—Yes, I suppose so.

15619. Would you object to that? Would that be a hardship?—Not the slightest.

15620. Can you tell me under what designation any mixed spirit that you have goes out now? How do you label, or how do you mark your casks if they contain eau-de-vie de vin as well as Cognac?—All our casks are branded "Thomas Hine and Co., Cognac," and if occasionally we are asked for a cheaper quality we would never brand it "Cognac."

15621. If you did brand it "Cognac," you would be liable to be dealt with under the law we have been talking about?—Yes, of course.

15622. It would be wrong according to law?—Yes, of course.

15623. You would put on the casks that you were négociants à Jarnac?—No, we would either put nothing at all, or if we had to put something we would brand only "Jarnac" under the firm's name.

15624. But you must invoice the mixture as something?—As brandy.

15625. Or as eau-de-vie in France?—In France, eau-de-vie.

15626. I gather you do a good deal of export trade to various countries?—Yes, we do.

15627. In the case of your trade to America you certify that the brandy is Cognac brandy and has been distilled in the Cognac district, do you not?—Yes.

15628. And in the case of Australia you certify that it is entirely the product of distillation of wine from grapes in the district of the Cognac?—Yes, we do.

15629. And in the case of Australia, you also certify that it has been matured for two years?—Yes.

15630. Those are declarations of the firm made before the Consuls?—They are visaed by the Consul, as a rule.

The witness withdrew.

(Adjourned for a short time.)

Mons. J. Delamain.

Monsieur JACQUES DELAMAIN, called.

15631. (*Dr. Cushny.*) You are a distiller, I think?—I am. My firm is Roullet and Delamain, Cognac brandy merchants, and we distil also ourselves.

15632. At Cognac?—At Jarnac, near Cognac. We distil some of the wines we buy, and we buy from the farmers.

15633. Is most of your trade export?—Yes, we have a trade in France, and we also export to Sweden, Norway, England and Holland—to all the north countries, and also to some other parts of the world.

15634. Do you export in bulk or in bottles?—In bulk and also to this country in bottles. We do very little case trade. We deal specially here with high-class wine merchants, and we have not attempted, perhaps because we have not been clever enough, to force our name on the public, so that we depend very much on the wine merchants.

15635. Do you deal exclusively in Cognac brandy?—We have, as many other firms have, to do with certain other special foreign countries, mainly the colonies, a little cheap trade which we do not like to do, but what we have to do in it we do with a pure grape spirit, which we think is better from all accounts than the grain spirit, which we do not touch.

15636. What is your definition of brandy?—My definition of brandy is the produce of the distillation of wines, and Cognac brandy would be the distillation of the wines of the Cognac district only.

15637. Would that brandy have to be distilled in France or would you accept other brandy?—Do you mean Cognac brandy?

15638. Ordinary brandy. Would you apply the word brandy to Californian brandy?—I think originally in the old times what was meant by brandy was really Cognac brandy, but since then there has been Californian brandy, Australian brandy, and a good many other brandies, so we had to call Cognac brandy brandy which is made in the Cognac district,

although I think brandy meant really Cognac. When a man was asking for brandy he expected to get some Cognac.

15639. You believe that the grain spirit and the brandy are kept sufficiently apart in France by acquits?—Yes, I think the acquit rouge and acquit blanc are kept sufficiently apart. I think there is a good guarantee there.

15640. Do you think that Cognac brandy under the new law should be kept in a separate chai?—I would be rather in favour of that. I think all the guarantee we could get for the Cognac brandy would be all the better for us who only wish to trade in Cognac brandies.

15641. Does that mean in Cognac itself or in France?—That would be in Cognac, because I do not think it would be practicable in other parts of France. The wholesale wine merchants in France could not afford to have as many separate chais as they have different classes of brandy.

15642. Do you think it would be sufficient to separate them in Cognac and let them mix elsewhere?—Of course, it is very difficult to say. I think it would be a great step forward if we could have them separate in Cognac, and, of course, it would be better if we could also have them separate in other parts of France, but I do not think it is quite practicable at present.

15643. Do you think, as far as the wholesale merchants in Paris are concerned, that this law would be a dead letter practically?—I do not think it would be exactly. It would be, of course, a guarantee to him that he gets from us something that is really Cognac. In that way it would be useful, and I daresay it would also enable him to give the same guarantee to his customers, the retailers.

15644. Would it give it them?—I think so if he had a separate chai.

15645. But we are assuming that he would not have a separate chai?—Some may have them, but I do not think they would all care to have so many chais.

15646. You would admit that you would have no objection to all eau-de-vie de vin being admitted to England, at least as brandy, but do you think there is anything else admitted to England as brandy?—I am afraid at the present moment there is something else than pure brandy admitted to England as brandy.

15647. Where does that come from?—It may come from France or from other parts—from Egypt, for instance. I have heard a good deal about Egyptian brandies, and people who have been in Egypt have stated many times that there was not a vine in Egypt, but there is a good deal of Egyptian brandy shipped to this country.

15648. What is it made from?—I could not say. I have no knowledge at all. If it is not made from grapes it must be made from grain I should say, but, of course, I do not know.

15649. You think that that should not be allowed to be called brandy?—If the Commission adopts the definition of brandy that we have all given it, it should not be allowed in this country as brandy, and no more should the spirits shipped from France which are shipped under the acquit rouge and which are blended, of course.

15650. Then, if that were adopted there is no method, except from the place of origin, of detecting the difference between the brandy and this false spirit?—I think it is a rather unfortunate thing that you cannot have on this side, in England, an extension of the permit system. If you could keep a certificate stating the kind of permit with which the stuff has been sent over, it would be a great step to stopping some of the cheaper stuff coming over to this side.

15651. Will you explain that a little more?—For instance, a parcel is shipped from Cognac under the acquit rouge, which, of course, means blended brandy. If you on this side could get to know under what permit it has been sent, and if you get proof that it has been sent under the acquit rouge I think you could stop it from coming into this country as brandy. If the description of brandy that is adopted by the Commission is pure grape spirit, anything that is proved to be not pure grape spirit could be stopped, provided, of course, that you get proof that it has been sent from France under the red permit, for instance.

15652. It could be stopped by the Customs?—I think it could be stopped by the Customs.

15653. What is your opinion as regards the bonding of brandy—the keeping of brandy?—We have always sold in this country to the wine merchants who usually buy our brandies when they are young and keep them a certain number of years, and when they think they are fit for consumption they sell them to their customers, and the wine merchants usually give very good value when they adopt that system of bonding.

15654. You mean the brandy improves by age?—I think brandy improves by age, and especially improves by age on this side owing to the climatic conditions, which I cannot explain. There is no doubt that brandy on this side improves to a much greater extent than it does on our side. I cannot say why, but it gets much softer and much finer; for instance, brandy that has been five years on this side and brandy that has been five years on our side differ considerably. I think it is a well known thing.

15655. Do you think that new brandy is injurious?—I do not think that new brandy is injurious at all. I think it could be used, indeed I think it ought to be used in preference to cheap stuff that is older. I think young brandy has never done any harm to anybody.

15656. But it is not so palatable?—It increases in quality and in fineness when it has been kept some time on this side.

15657. You recommend that brandy should be kept in bond?—I should not recommend compulsory bonding, for I do not think it would be of much use, and it might keep people from using Cognac brandies. I think it is a good thing for the taste of the brandy to be kept on this side.

15658. Is most of the brandy shipped from Cognac kept in bond for some time?—Yes, I think usually, especially when we ship young vintage brandies, they are kept for two, three or four years up to 10 or 20 years on this side, and I think I can say that they are the finest you can get. For instance, brandy that has been kept for 20 or 30 years is really very fine.

15659. (*Dr. Bradford.*) Is it a matter of general belief that brandy improves better by keeping in this country than in France?—When it is kept in cask, I think it is a matter of general belief in the trade. I think there is no doubt about it.

15660. (*Dr. G. S. Buchanan.*) Do you happen to know anything about the extent of the production of brandies in the Charente district?—Yes, I have a few figures that I would like to give you.

15661. Perhaps you will read them to the Commission?—Yes. The average production of wine for the last four years has been 56½ million gallons of wine made in the Charente district, as it is delimited.

15662. Per year?—Yes, that is the average per year. Taking eight gallons of wine to make one gallon of brandy, which I think is a very fair average, that gives an average per year of seven million gallons of brandy of a strength rather over proof. That we have produced in the Charente district every year as an average for the last four years. I can give you the figures of the consumption. The consumption of about proof gallons for the last six years in England of Cognac brandy has been a little over two million gallons, so that we have produced in the Charente five million gallons more that remain for the rest of the world. We have produced seven million gallons, and England has only taken 2½ million gallons, so that leaves five million gallons for the rest of the world, which shows, I think, that our production is more than is wanted for this market and for other markets.

15663. Is the 2½ million gallons that have come to this country Charente-produced Cognac that has left the district?—Charente and Charente Inférieure—nothing besides those two departments.

15664. How much brandy has left the Cognac district—I mean simply called brandy for export to this country?—I am afraid I have not got the figures.

15665. Would it be more than 2½ million gallons?—I could not say; I have not the figures at present.

15666. But your point is that there is at the present time a considerable quantity of genuine Cognac brandy?—Yes, that is my point.

15667. At the same time it is a matter of common knowledge, I suppose, that we do get from the Cognac

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district, in addition to Cognac, mixtures and blends?—Yes, I think that is so.

15668. That is at present perfectly legitimate?—There is no doubt about it, provided that what are shipped as a blend or pure grape spirit from other districts than Cognac are described as such and are described as what they are.

15669. Can you tell me in your case how you distinguish between Cognac and the blended Cognac with other wine spirit when you export them?—We would ship under our own brand the Cognac brandies, and we would put on the label or on the cask Roullet and Delamain, Cognac, and if we shipped blends of pure grape brandy and Cognac brandy we would not put Cognac, and we would avoid putting our name. We would put a second brand.

15670. You would put a fancy name—that is a registered name?—Yes, and we would not put the word "Cognac." For instance, as our firm is in Jarnac, we would say "Jarnac." The word Cognac should not appear, because it might lead to confusion.

15671. In the case of any case trade or bottle trade you would do the same?—Yes, in the case of case or bottle trade we would do the same; we would employ the word Cognac only when we shipped Cognac, but the word Cognac placed under our name is not a generic name. In the previous evidence there has been a little doubt about it. I think Cognac placed under the name of the firm is not a generic name, but at the same time it is a sort of address—it is the name of a locality. We have been fighting for this, especially against the Germans, who say: "The word Cognac is a generic name, and we can use it under any firm's name, even established in Germany."

15672. For any kind of spirit?—Yes, for any kind of spirit, even for grain spirit.

15673. Hamburg spirit?—Yes, Hamburg spirit—say, Mr. So-and-So's Cognac—and if we want to stop them, they say: "You have no right to stop us doing that, because Cognac is a generic name." We have always told them it is not. To put Cognac under your name you must fulfil two conditions—first, the brandy must be Cognac; and, secondly, you must be established in the two Charentes. If you do not fulfil those two conditions you cannot use the word Cognac, which is not a generic name.

15674. You mean the origin must have been from some firm established in Cognac?—Yes, the origin.

15675. That question between you and the Germans, perhaps, is a little outside our reference, but I take it that is one of the questions which Mr. Hennessy was referring to as probable matter of negotiation between the two countries in regard to description?—Yes, we hope we shall bring the Germans to acknowledge that they cannot use the word Cognac under the German firm's name.

15676. If they give up making Cognac in Germany, you will give up making Munich beer in France?—Yes, that is the position.

15677. (*Chairman.*) That is reciprocity?—Yes, good feeling.

15678. (*Dr. G. S. Buchanan.*) May I take you back to the question of labelling. When you send out Cognac from your establishment, you put your name and the word "Cognac"?—Yes.

15679. That is a description that it is Cognac, that it is a spirit that has been made in the Charente and distilled in the Charente?—Yes.

15680. Then when you send out a mixture of Cognac and other grape spirit, you do not use the word "Cognac" at all?—No, we would not use the word "Cognac" at all.

15681. In your case, you happen to live at Jarnac?—Yes.

15682. If you lived at Cognac, you would be entitled, would you not, according to the French law, to put the words Négociants à Cognac on your label or on your casks?—Yes.

15683. Could you put the word Cognac so as to make it appear that that is the product?—No.

15684. You must make it appear that you are négociants à Cognac?—Yes.

15685. As regards those words on the labels, the law requires that all the letters should be of the same size?—That is so.

15686. Then there was a further practice, which I think is still adopted, or may be adopted, in some districts of registering the trade mark, the marque deposée à Cognac?—Yes.

15687. That is objected to by some people?—Yes.

15688. We saw some specimens of labels on which the words "marque déposée à Cognac" appeared, and it seemed to us that the marque déposée being printed rather small and the Cognac being rather large, it did convey the impression that the spirit was Cognac?—No doubt it does, and that is why it is objected to.

15689. I looked up the question in this text-book, "La loi sur la répression des Fraudes et des Falsifications," by M. Taquet. I see a statement there that this practice has hitherto prevailed, but that it is very questionable as to whether it is legal?—I know. It is discussed at the present time.

15690. At any rate, in your case, unless you went out of your way to register yourself at Cognac, you would not use this term on your labels?—No.

15691. And you do not think it would be fair?—We do not think it would be fair; we do not like to use it.

15692. Your opinion, I understand, is that the acquit blanc is a sufficient guarantee that any spirit going out of the country under it has been derived entirely from wine?—Yes. I would not say it is entirely efficient, but I think it is amongst other guarantees perhaps a help with, say, for instance, the honesty of the shipper and other guarantees of that sort which may not be quite sufficient. I think all those guarantees go to make the thing pretty certain.

15693. It represents surveillance by the Excise?—Yes.

15694. It does not represent that they have followed up every drop or kept it under lock and key and know it from its beginning to the end?—No.

15695. But it does represent a supervision and a surveillance?—Yes.

15696. Should you think that that is a considerable guarantee?—I think so.

15697. We have heard a good deal from Mr. Hennessy and others about this new French law and about the action taken in other countries in regard to brandies. Do you think that those have hitherto produced any effect as regards improving the quality of brandies?—Yes, I think all these measures, although they may not be absolutely efficient and sufficient, have done some good. For instance, Mr. Fordham's judgment, which has been much discussed and which is open to discussion, has certainly improved the state of the market, and to my knowledge I think there is not as much grain spirit sent to this country as brandy since that time, although I say again that the standard is not right in many cases.

15698. The standard of others you do not regard as a satisfactory criterion?—Not quite. It may be a fair average, but I do not think it would be quite fair to condemn a man on that simple standard.

15699. But in regard to the fact that there have been steps taken over here under the Foods and Drugs Act to deal with brandy that was considered not to be properly described and that was not the juice of the grape, and with regard also to what has been done in France, you think the effect generally has been marked?—Yes, I think the effect has been decidedly better, and it has improved things to a certain extent.

15700. You would not like to go back to the position of things a few years ago when there was much less control?—No, we would rather go forward and have the same measures rather enforced.

15701. (*Dr. Adeney.*) Did I understand you correctly when I gathered that your idea of brandy was a wine spirit—a grape spirit?—Yes, I think that is my idea.

15702. Is that quite a sufficient definition, do you think? I have in my mind, for instance, that you could produce a perfectly neutral spirit from wine?—Yes.

15703. And flavour it with essences?—Yes.

15704. Would that be brandy?—I think it is rather difficult to draw the line, because these cheap bran-

dies want rectifying, no doubt, but to what extent they should be rectified or should not be rectified, is very difficult to say.

15705. Would you put on a limit with regard to the extent of rectification?—I could not suggest anything in that line.

15706. Do you think your new Food Law will be able to help in that direction?—They propose to set a standard, but I do not know what standard they are likely to fix.

15707. It is only such a body as that that could possibly attempt such a task?—Yes, I think so.

15708. If the rectification is carried beyond a certain point then all character of brandy disappears?—Yes, all character of brandy disappears, and it gets nearer the neutral spirit more and more, and to be brandy it must have the characteristic flavour. I think at the same time these cheap pure grape brandies, even when they are highly distilled, have always something of another family, finer than the grain spirit—there is always something more in them.

15709. The producer in France of the cheapest brandies—I mean the cheapest he might sell legitimately—has to put on the market as cheap brandy as possible in order to suit the pockets of a certain class of consumers?—Yes.

15710. Would it be possible, do you think, in the production of such cheap brandies, to entirely confine yourself to the use of wine spirit, or is it necessary to go to the grain spirit?—I do not think it is necessary to go to the grain spirit. There is no doubt a movement in France that grape spirit should go to human consumption, and that the cheap grain spirit should be used for industrial purposes.

15711. You can, in other words, get grape spirit sufficiently cheap for all purposes required for the production of cheap brandy?—My knowledge of these cheap spirits is not a large one, but I think you could. I think you could get those spirits cheap enough.

15712. There is one slight alteration I think I might suggest with reference to the figures that you gave us as to the consumption of brandy in this country. I understand from our Excise officer that it is 2 1-12 million gallons which is the average total consumption?—Yes, 2 1-12 million gallons.

15713. That is the total consumption of brandies of all kinds?—Yes, not only of Cognac.

15714. Then I think you were slightly mistaken there?—Yes.

(*Chairman.*) Do you know what proportion comes from Cognac of that 2 1-12 million gallons?—I do not think I could say.

15715. (*Dr. G. S. Buchanan.*) It appears that it is the consumption of all kinds of brandy?—Yes.

15716. (*Mr. J. Y. Buchanan.*) In the details you have given us as to the amount of brandy that is yearly made in Cognac, there is the figure of seven millions of proof brandy made in the Cognac district. Can you give us any information as to the proportion that that bears to the potable wine spirit made in France in the year? Do you know at all what that is?—I do not understand your question.

15717. Of course, there is eau-de-vie made from wine in the various districts of France for consumption?—Yes.

15718. And there is the seven million gallons made in the Cognac district in the year?—Yes.

15719. Have you any idea what the proportion is of the Cognac brandy to the total brandy made in the year in France?—No, I have not. The seven millions are only for the Cognac brandy.

15720. I know, but I thought the Commission would like to have an idea of the proportion which Cognac brandy bears to the total production?—I could not say at present. I could not say what proportion of brandy is made in other parts of France.

15721. But in the wine districts of France there must be a great amount of wine distilled?—Yes, but there is a large proportion sold for consumption as wine, so I could not say what proportion has been distilled.

15722. (*Chairman.*) Cognac is a term which is applied to brandy, and, if we may translate it, is what we know in this country as brandy. If you ask for brandy you might get Cognac brandy?—Yes.

15723. That is pure grape and nothing else?—Cognac comes from pure grape grown in the Charente district only.

15724. Just like Herefordshire cider is made in Herefordshire?—Yes.

15725. Have you not eau-de-vie de vin made outside Cognac and in Cognac?—Eau-de-vie de vin made in Cognac is Cognac brandy if distilled from wine made in the Cognac district.

15726. What is eau-de-vie de vin composed of?—Eau-de-vie de vin is distilled from wine made in any part of France.

15727. But still wine only?—Yes.

15728. Now drop the "de vin" and go to eau-de-vie?—Yes.

15729. As far as you are concerned?—Eau-de-vie is a blend.

15730. You have told me what Cognac is made of and you have told me what eau-de-vie de vin is made of. Now we come to eau-de-vie. What do you say that is made of to entitle it to be called eau-de-vie?—Eau-de-vie may be made of anything—a blend of any spirit.

15731. Is it confined to cereals?—Any spirit. I think there is a certain proportion of grape spirit that ought to be put in it.

15732. To constitute eau-de-vie is there not some proportion of grape?—Yes.

15733. I think Mr. Hennessy said this morning there was a certain proportion of grape, but I am not sure what?—Yes.

15734. I now want to come to translation. Of course, Cognac and eau-de-vie de vin are both well known in this country as brandy?—Yes.

15735. What do you say as to eau-de-vie by itself? Ought that to be known here by the term brandy?—From the description we have given it ought not to be known as brandy.

15736. Will you please explain why you say that?—If we take it for granted that brandy ought to be made from pure grape, we should not give to the blend of grain spirit and grape spirit the same name.

15737. That is a question of name, but that is an arbitrary definition for you—the definition, made of grape only. You have no standard?—We have got to start with a certain definition of what is brandy. We have given the definition which we think ought to be given.

15738. Where do you get it from? When I said a standard I meant a legal standard—your definition. You have not got that, have you?—I think brandy comes from "branntwein," which means burnt or distilled wine, and there is the idea of wine in this.

15739. Will you perform the duty of sponsor? What would you call this eau-de-vie, which is neither Cognac nor eau-de-vie de vin? What do you as a sponsor think we ought to call it?—Blended brandy. It is rather a difficult thing to say.

15740. I am sorry to place such a heavy duty on you?—I think it desirable that there should be one word for these blends and another word for the pure grape.

15741. As a merchant, I am quite sure you can see the desirability of it?—Yes.

15742. And it is a proper view to take, I think. Do you think this eau-de-vie simply is injurious to health?—I do not think it can be compared to Cognac, of course. I do not think it can be very good for the health; I should not think so.

15743. What is it? Do you think it is composed of cereals?—Yes. In other words, eau-de-vie contains a proportion of grain spirit.

15744. Why should that be injurious to health?—We may judge from what we like ourselves. I would not like to drink those blends myself; I would derive no pleasure and no benefit, I think, from them. I think good brandy would be different.

15745. Cognac brandy is a little dearer?—Yes.

15746. Of course, there are a good many poor people about, in our country at least, who would like to get

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a cheap article if they can, and if it does not hurt them very much, and if they like it?—Of course, but I do not think they can derive great benefit from these blends.

15747. They have to be set aside for a lower grade of palate than those of people who can afford to pay for the higher class of brandy?—Yes, and it is a question also whether grain spirit is injurious to health; I should not think it is very good for one's health, but, of course, scientifically, I could not prove what I say.

15748. Can you describe in any way the difference in flavour between eau-de-vie and eau-de-vie de vin?—I think eau-de-vie de vin has something which is palatable and fresh in it, whilst grain spirit is something dead, and it has practically no flavour unless it is flavoured by some essences which surely cannot be good for the health.

15749. Is maize used at all in this eau-de-vie?—I should think all cereals, although I do not know.

15750. That would have rather a bad flavour?—These neutral spirits, of course, have no flavour at all, and they must be flavoured by something else. I think both this spirit and the essences put in it cannot make anything that is good for the health.

15751. If not injurious, at any rate you think it objectionable to put in spurious matters to give it taste?—Yes.

15752. (*Dr. G. S. Buchanan.*) Are you familiar with grain spirit?—No, we do not touch grain spirit.

15753. We had an opportunity of tasting some grain spirit when we were in Cognac which was used in some of the mixtures and it seemed very like grain whiskey; it had at all events the same characteristic and it was not absolutely neutral?—I dare say if you put any kind of spirit in a cask, for instance, it will get the tannin of the cask, which already alters the neutrality a bit, but I could not say of course if what you tasted was natural grain spirit or was flavoured up.

15754. The Chairman asked you about eau-de-vie simply. I see that Article 6 of the Law of 1905 with regard to frauds mentions a number of them—eau-de-vie de vin, eau-de-vie de cidre, eau-de-vie de marc, and so forth, which are defined, that is to say, if you have eau-de-vie de vin it must come entirely from the distillation of wine and eau-de-vie de cidre must come from cider, but it has no definition of eau-de-vie by itself. You suggested that eau-de-vie must contain some grape spirit?—I am not quite certain about it, but these definitions have been altered, for instance, the word "fine" in the French law has been altered. At first "fine" could be anything else but the new regulation is that it cannot be used with the same meaning now. I have been away from France lately and I could not get exactly all the last details.

The witness withdrew.

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Monsieur Auguste Fernbach, called.

15755. (*Dr. Adeney.*) You are a Doctor of Science of the University of Paris, I believe?—Yes.

15756. You are also head of the Fermentation Department of the Pasteur Institute?—Yes.

15757. And Lecturer of the Fermenting Industry in the Paris University?—Yes.

15758. You are also I think a member of the Commission which has charge of drawing up regulations under the 1905 law?—Yes, I am.

15759. I should like to ask you as a member of that some particular questions. You, of course, are aware of the acquit system under the French law of 1872 and 1903?—I have some notion of it.

15760. It gives protection up to the point where the spirit leaves the Excise control we will say?—Yes.

15761. Do you agree with that?—Yes.

15762. But it gives no further protection after that to the consumer?—You mean for export.

15763. Or as it finds its way to the consumer?—No, it is not an absolute protection.

15764. I understand that this 1905 law comes in to supplement that protection?—Yes, surely it is intended for that.

15765. And a Commission has been formed under that law to draw up regulations?—Yes, you must think the Commission is of considerable size; that is true, but of course that Commission is composed of a great number of persons, each of which has very special competence, so that the number of Commissioners who are competent on the question of spirits, of Cognac, and of alcohol in general is somewhat reduced.

15766. Do you think there is any hope that in the operation of this law when your regulations have been completed and the law is administered wisely the effect of that law will be to in any way keep up the standard of quality of spirits?—Yes, I think it will within certain limits, of course, but the law and regulations cannot do all in that direction.

15767. But it is an attempt in that direction?—Yes.

15768. Then as regards these cheap brandies, which, we have been told, it has been found necessary to produce in order to meet the pockets of poorer members of the community, I have gathered that it does not necessarily mean that the spirits are in any way unwholesome?—No.

15769. Would the operation of this law of 1905 have any effect in tending to ensure that these cheap spirits, although cheap, should be wholesome?—The law has no object I think on the question of a spirit being wholesome or not, because first it should be established why the spirit will be wholesome and about that we do not know anything.

15770. I take it that the law would take cognisance of it, and if it could be shown that it was unwholesome it would stop it?—Of course the fact of being wholesome or not is made up of so many particular points that I do not think anything general can be affirmed about it.

15771. In coming to the production of brandies in France there are several districts in France in which brandy is produced?—Yes, several districts in which brandies are produced which have their special names besides the name of eau-de-vie or eau-de-vie de vin.

15772. Can you give us those?—For instance, in the South of France we have Armagnac, which is a region where they produce special brandies which are renowned, but of course in every country where wine is produced they produce brandy or eau-de-vie de vin. The superiority of the Cognac is due to the special kind of wine which is submitted to distillation, and also to the distilling process, whereas in the southern countries, except perhaps Armagnac, they generally submit to distillation diseased common wines, which cannot be kept. Only in these last years all sorts of wine have been distilled. The reason is that they have been obliged to distil wines that they cannot sell in the form of wine.

15773. I would like to ask you on those points have you decided in your own mind whether it is possible to give a definition of the word "brandy"?—I think that under the name of brandy we must understand all wine spirits—the product of the distillation of wine.

15774. You would exclude fruit spirit?—Yes, I would exclude fruit spirit. I would not consider that as being synonymous with what you term brandy and what we term eau-de-vie. Eau-de-vie is a generic name and when it is not followed by something else you must understand under that name of eau-de-vie any potable spirit.

15775. Would you allow the name of brandy to any wine spirit and mixed with grain spirit?—I do not see any objection to that.

15776. Even if the proportion of the wine spirit were very low—say 15 per cent.?—That is a matter of commercial terms. I cannot see for what reasons we should not admit that from a scientific point of view.

15777. But as a consumer, if he asks for brandy?—Do you mean to say if I myself were the consumer?

15778. Yes. If you asked for brandy and you got a mixture to the extent of 15 per cent., would you object?—I would not object to that.

15779. What would you expect to get when you asked for brandy?—If I asked for brandy, of course, I would expect to get wine spirit, eau-de-vie de vin, the product of the distillation of wine, but from the point of view of a wholesome beverage or something that would be good for health, I do not object to drinking anything else which would be a mixture of that wine spirit with any other potable spirit having another origin.

15780. The question of health does not come in?—No.

15781. I understand that it is merely a question of flavour?—Yes. I think the question of health must be excluded because if there is some noxious substance in the spirit that is consumed, the effect is essentially due to the substances other than alcohol, so that the purer the spirit is the better it will be for the health. It is not a matter of health, but it is a matter of pleasure that it produces to the person that drinks it. It is a matter of habit, and health has nothing to do with it.

15782. Do you consider that there is any knowledge extant which can be considered a safe guide as to the physiological effects of different spirits upon the human system?—I do not think there is anything on which we can rely.

17583. We have not definite knowledge on the subject?—All experiments which have been made have been made by such means that they must be considered incorrect.

15784. And certainly unreliable?—Yes. Of course they have been made on animals—men being excluded—and they have been made by means that are not at all comparable to the consumption of these spirits, that is, by injection under the skin or in the veins. That has nothing to do with the general mode of consumption.

15785. What is the nature of the evidence which will be relied upon by the French food laws to prove misdescription of a given brandy?—You mean in relation to Cognac?

15786. Suppose a retailer is charged with selling a spirit which is other than that which is described, what is the nature of the evidence which will be relied upon to support that?—Of course, we have chemical analysis, but that alone is not reliable. We have the taste test which is perhaps the most reliable of all, at least if it is joined with the analytical data, and then we have the acquits which are working which are not exactly a certificate of origin, but which can be made to rule.

15787. Which can assist in the prosecution?—Yes, they facilitate of course the inquiry about the origin of the spirit.

15788. Now if you rely upon taste, and also to a certain extent on chemical analysis, you have some idea of definition or standard. Has that been arrived at, for instance, if it is a question of whether a given brandy is a Cognac brandy?—For that we have no chemical definition relying on a standard of a definite composition. The only thing we can take is a commercial definition. We must admit that Cognac, as has been said here several times, is the product of distillation of wines that have been grown in the Cognac district, and that have been distilled in the Cognac district.

15789. And which has a definite characteristic flavour?—Yes, but that we cannot define by any other means. If we do say that it has a definite character as to flavour, everyone will know what it means, but no one will be able to say exactly what it is.

15790. Then I gather from you that under those regulations expert tasters will be employed?—Yes, and they are already employed.

15791. And they will decide the question whether it has the Cognac flavour or not?—Yes.

15792. Now, as to chemical analysis, have you decided on any official methods of analysis?—Yes, they have been decided and they have been published I think.

15793. Could you give us a reference to the publication; perhaps you could tell us afterwards?—Yes, I cannot tell exactly, but I think they have been published in the official publication which relates to the new law.

15794. Would it be possible to obtain copies of that?—Yes, very easily.

15795. Would you undertake that for us?—Certainly.

15796. You will agree with me that it is a most important thing that the methods of chemical analysis that are adopted should be most carefully described?—Yes, especially as far as the determination of esters is concerned which, as I know, are most important in this country, or at least have been considered most important. I think it is most important that these methods should be defined very well, as it has been observed that the amount of esters present in a spirit decreases very quickly if the bottle is opened, or if that spirit remains in the glass for a few minutes only, so that it is most important that the methods should be quite accurate.

15797. That may be even altered in the process of distillation I think?—Yes, in the process of distillation, and not only in the process of distillation, but in a brandy that is ready for consumption. I have data here which have been collected by most accurate methods which state, for instance, that leaving a potable spirit 15 minutes in an open glass will lower the amount of esters from 749 grammes per hectolitre to 673 grammes per hectolitre and to 552 grammes per hectolitre in an hour.

15798. (*Dr. G. S. Buchanan.*) At what temperature?—At the ordinary temperature. The spirit is at 40 degrees, and if it were at 50 the decrease is a little lower.

15799. Could you supply us with a copy of that work?—Yes, I will hand it to you now. (*Same handed to the Commission*).

15800. (*Dr. Adeney.*) Then, as to the analysis of different spirits, is the one which you call brandy characterised by any definite broad composition?—Yes, there are some standards, of course, according to the numerous analyses which have been made, but they are not absolute. You could not, as has been said, fairly condemn a man for selling brandy that does not contain a sufficient amount of esters; for instance, I have here a number of analyses of genuine Cognacs from the grape.

15801. Of undoubted origin?—Yes, of undoubted origin from 1906 in which the general feature and the amount of different substances can be seen very clearly, and in which I find two samples which have 72 grammes per hectolitre only of esters, and another 74, which are exceptional, because most of them have between 90 and 120 grammes per hectolitre.

15802. Have those analyses been made under similar conditions as to details?—Yes, they have been made by the very same man who has published that little book which I have just handed to the Commission.

15803. Could you let us have a copy of that book also?—Yes, I will hand it to you. (*Same handed to the Commission.*) It is a comparison between the composition of different wine spirits having another origin than Cognac. There you will find data of the composition of Cognac as it is required on the English market. For instance it establishes a certain relation between the amount of superior alcohols and esters. Superior alcohols should be a little over the esters; about one-tenth more, generally, in genuine Cognac. Then you have a comparison of the compositions of these different brandies with potable spirits having another origin, and also with silent spirits from different origins.

15804. Those are all done by the same analyst?—Yes.

15805. What do you consider is the value of the ether standard that has been proposed in this country? Do you think it is a sufficient standard?—I cannot say that it is. It has no value at all.

15806. Will you explain why you say that?—If this is the only character on which a judgment has to be based, to say that brandy is Cognac or is not Cognac,

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then I mean that it has no value, because we know very well from the analysis that I have just given that you may have genuine Cognacs, the origin of which cannot be doubted, that contain an amount of esters which is under the limit which has been adopted of 80 grammes per hectolitre of pure spirit. That is why I say that establishing such a limit on those lines is not correct. Of course if a potable spirit were sold as Cognac or brandy—to take that general term—that would be under that standard and would have a composition which would show that it is different, and would present other characteristics, those other characteristics joined to the absence of a sufficient amount of esters would seem fair. But a judgment based only on the amount of esters must be considered as not being correct.

15807. Do you know anything of the distillation of brandy on a large scale?—Yes, I know what everyone knows.

15808. Are you acquainted with the various types of stills that are employed?—Yes, what I know is that in the Cognac district the simplest stills are employed. Attempts have been made to employ more perfect stills but without any good result.

15809. It is sometimes said in this country that the more complex stills have only come into use since the ravages of the phylloxera. Is that correct?—No, because those complicated stills have been employed long before in the manufacture of spirits generally.

15810. Industrial spirits?—Silent spirits.

15811. But I mean for the production of Eau-de-vie de vin?—I am not aware of that, but it may be that the origin has to be traced to the time when the wine became a more rare substance for the purpose of distilling, so that they have attempted to employ more perfected methods of distilling, but the product was not better surely, and even it is said that it is of an inferior quality.

15812. Have you formed any particular views as to the influence of age upon wine spirit?—Upon the chemical composition?

15813. Yes?—It has surely an influence. It must be imagined that when a wine spirit is in the cask which will admit the penetration of some oxygen from the outside and will admit an evaporation of alcohol or volatile products in general, it must undergo some change, and after what has been determined by analysis it is known that the most sensitive change that Cognac undergoes with time is a decrease of acidity which can only be due to an increase of esters; but very little is known on that question. I must say we do not know much because those persons who can have an opportunity of getting genuine samples of a certain age do not take an interest in chemical researches, and those who take an interest in chemical researches have no opportunity of having the genuine samples, that is because the trade has lived and lives still far apart from the scientific persons.

15814. (*Chairman.*) Intentionally?—No, not intentionally, my lord. I suppose they have no time on account of business questions to come in contact with the scientists.

15815. (*Dr. Adeney.*) Do you look forward to the time when chemical analysis will be of more value—I mean when more accurate methods will obtain?—Yes, I think we can look forward to that, but at present we must not confide too much in chemical analysis. Of course there are some cases in which chemical analysis will not only be of great utility but will be almost necessary. If some measures have to be taken to secure the genuine state of a potable spirit that has to be sent out for trade, in those cases such measures as will be thought useful will be taken. In that case surely chemical analysis will be not only useful but necessary, and we shall not be able to dispense with it.

15816. Do you agree with me that in the hands of a skilled chemist a similar spirit will on an analysis by similar methods give concordant results?—Yes, I think that will be obtained with time, but at present I think that similar results will be obtained only in the hands of one single chemist. If you propose to several chemists to make the analysis of the same sample they will surely come to different results, because each of them has his special methods, and even following standard methods they will not all come to the same results.

15817. Every detail in the operation of the analysis must be similar?—Yes, every detail is of great importance.

15818. And until we can get to that we shall not be able to get concordant results from the analysis of portions of the same spirit by different chemists?—No.

15819. Now with regard to age. Do you know of any additional physiological effect that is produced by age?—No, I have not heard of that. I know that in this country some importance is attached to the fact that age will produce in a potable spirit some wholesome properties which it had not before, and will make it less noxious, but I am not aware of such things having been stated by accurate experiments.

15820. (*Mr. J. Y. Buchanan.*) You said in reply to Dr. Adeney that the French Commission which is the body now dealing with food products does not go into the question of the wholesomeness of them?—No, it is more a commercial point of view that is guiding them.

15821. Taking the substance with which we are occupied at the present time, which is potable spirits, what would it devote its attention to—would it be to the origin or to the constitution?—It would be more to the origin—to the question of definition.

15822. They will not occupy themselves in considering whether the product that was made was more or less wholesome to the person who drank it?—No.

15823. But they will leave that, I presume, to the discretion of the individual who purchases the article?—Yes, nothing has been attempted as far as the regulations are concerned from that point of view at all.

15824. They leave that entirely to individual initiative?—Yes.

15825. (*Dr. Cushny.*) You seem to say that the deleteriousness of brandy might be due to non-alcoholic causes?—To the products it contains besides the alcohol. I do not say that I do not attach any deleterious effects to ethylic alcohol itself, but I mean that the products that it contains besides alcohol seem to be more noxious than the alcohol itself.

15826. Is that merely a personal opinion?—It is an opinion that is derived from general researches that have been made on that subject, but of course with the latitude that is left by the confidence we may have in those experiments.

15827. I do not quite understand you?—I mean that as far as we can know from those experiments which have been made with regard to the noxious effects of potable spirits in general it must be believed that the products which they contain besides ethylic alcohol are more noxious than ethylic alcohol itself.

15828. Can you refer the Commission to any of those researches?—Those researches we cannot have much confidence in as far as they are applied to the consumption of potable spirit, but nevertheless they have a certain value as far as we compare them to one another, and if by injection under the skin of a rabbit, to take an instance, of different kinds of spirits we find that those which contain the highest amount of what has been called impurities and what we call at the present time non-alcohol, are more noxious than those which are purer—those that do not contain so many of these non-alcohol products—we are entitled to infer from those experiments that the products which are not ethylic alcohol are more noxious than ethylic alcohol itself.

15829. Have you performed experiments of this kind yourself?—No.

15830. Could you refer the Commission to anyone who has?—There have been many experiments; for instance by Mons. Dujardin-Beaumetz and Mons. Audigé in 1894.

15831. You think they established the fact?—Yes, for instance it is admitted that amylic alcohol is much more noxious than ethylic alcohol.

15832. Yes, that is quite admitted, but what I want to get at is whether there is any evidence that those more impure alcohols, such as Cognac brandy, are more poisonous than pure alcohol or re-distilled alcohol?—The fact of being poisonous or not is a question of use or abuse, I may say, and a question of the particular state of the consumer. It is a personal question. One man will stand drinking every day, up to a certain number of glasses, a certain potable spirit,

whatever it may be, and another man cannot stand that. That is a question which is so complicated by particular cases that it may hardly be spoken of in general terms.

15833. Would you say that it was correct that it is a general assumption that those strongly flavoured spirits, like Cognac brandy are more poisonous and more deleterious than pure alcohol?—Yes, it is a general assumption.

15834. (*Dr. G. S. Buchanan.*) Do you mean by "deleterious" distinctly injurious to health, or do you mean that it produces a different physiological action only?—A different physiological action of course. It is difficult to define exactly what you mean by "deleterious."

15835. (*Dr. Cushny.*) You mean that they were found more poisonous to rabbits?—Yes. Of course experiment has not been made on man, and there is always a great objection against applying experiments that have been made on a rabbit to a man. What I meant a few minutes ago was that even if the experiments have been made in an incorrect manner, as far as they are applied to man they are comparable between them.

15836. (*Dr. Bradford.*) With reference to the point that Dr. Cushny has been asking you about, do you mean that there are experiments showing the effects of taking a given quantity of some potable spirit and taking an equal quantity of alcohol of the same strength?—Of pure ethylic alcohol?

15837. Yes. Do you think there are any physiological experiments that show that the former is more toxic than the latter?—Yes, these are precisely the experiments that I have referred to.

15838. The experiments of Mons. Dujardin-Beaumetz?—Yes. In the experiments he injected a certain amount of both alcohols into the circulation of a rabbit, which is quite different also from our general mode of consuming alcohol, but in those experiments he came to the conclusion that the higher the molecular weight of the alcohol is the more poisonous it is. Then of course besides alcohols of higher molecular weight than ethylic alcohol there are other products in potable spirits which also may have a deleterious action.

15839. I think it is granted by everybody that the higher alcohols are more toxic. That is not my point, but what I want to clear up is, did Mons. Dujardin-Beaumetz compare pure alcohol with potable spirits or did he compare ethylic alcohol with the higher alcohols?—That I cannot tell exactly. I have not that present to my mind.

15840. But that is the point?—Yes.

15841. Are there experiments that show definitely that a definite quantity of pure alcohol is less toxic than the same quantity of potable spirit, brandy or other?—Yes, I think experiments have been made in that direction, but I cannot say positively. I have not at present quite correct remembrances of the experiments themselves.

15842. Everybody would admit that there are certain higher alcohols and other substances in potable spirits which are more toxic than ethylic alcohol. Of course we should all admit that. That is universally correct, is it not?—Yes. Surely the general opinion and the correct opinion is that if there is some noxious effect produced by drinking alcohol you will be able to drink so much the more as the alcohol will be purer—I mean of the potable spirit.

15843. You do not agree with the view of it that has attributed medicinal value to the so-called impurities of brandy?—I am not a medical man, and though I may have my own opinion I would not tell what it is. I would better keep it to myself.

15844. (*Dr. Bradford.*) Could you give us the reference to the experiments by Mons. Dujardin- Beaumetz?—Yes, I will give you that.

15845. (*Dr. G. S. Buchanan.*) Have you analysed the spirits from the Midi which we have been hearing about?—I have made occasionally some analysis of different spirits, not in a general way.

15846. I wanted to know from you whether there was a general distinction that could be drawn in chemical characteristics between the eau-de-vie de vin of the Midi and grain spirit?—You can see that. I will show you that in these data that I have here. We have there, for instance, whiskey, and the characteristic is having a very high amount of superior alcohols. (*See Appendix O.*)

15847. Even in the wine spirits that are rather highly rectified?—Yes, whereas the grain spirits have a very low amount of esters—from four to ten times less.

15848. When you spoke about the brandy that lost so much of its esters in an hour, was that a new brandy?—No, I think it must have been two years old.

15849. One has heard it said that a good old brandy will stand having the stopper out of the decanter for a good long time without altering its character, and I was wondering whether that would be so. Now, I want to ask you a question about the official methods that you have spoken of which have been recommended in these circulars on the authority of your Commission. Are they official methods of examination in the first instance in the provincial laboratories?—Yes, they are. Supposing a person be prosecuted for selling, under a certain name, a potable spirit which does not conform to the name he gives it, the matter will be submitted afterwards to his prosecutor after those analyses have been taken, and then the matter is followed up by experts who are quite free to apply in their analyses any methods they choose.

15850. That is what I wish to get at—if a *prima facie* case is made out?—The first step with that new law is to know whether a prosecution will be proceeded with against a person or not. That is the only object of those analyses which are performed in the official laboratories, and afterwards the State as prosecutor and the persons against whom it is proceeding choose each an expert, and those two experts may work together or separately as they choose, but they must agree. They are allowed to employ any methods of investigation they choose, but the only thing is they must agree in their conclusions.

15851. Or else they have an umpire?—Yes, they have a third expert who will settle the matter.

15852. With regard to the use of chemical analyses, as you were telling Dr. Adeney, there are two different points. In the one case the chemist is dealing with an unknown sample, and is asked if it is Cognac or whatever it may be, and in the other case he is given a sample and asked to compare it with a type he already knows, or with a sample that is alleged to be similar. Do you follow the difference?—Yes.

15853. I gather that your view is that a great deal more can be done with the comparative sample than with the unknown sample?—Yes.

15854. And chemical analysis in connection with your law is more helpful on the side of the known sample than on the side of the unknown sample?—Yes. When I spoke about that I referred to some new measures which could be adopted and which correspond with your requirements for the importation of our products.

15855. Precisely. That is to say, if it was desired to check over here the identity of a spirit which was we will say guaranteed from France?—Yes, then of course chemical analysis would have a great importance.

15856. It could do that already?—Yes, it could do it.

15857. Without any further elaboration?—Of course those measures have not been applied to Cognac, and they will not be applied unless you ask that they should be applied. We have a general system which is quite new, and that is the reason I suppose why it seems to be unknown to many of the gentlemen who have appeared here. It is what has been called the Certificate of Purity. The Certificate of Purity may be delivered for certain products and after convention has been made with certain countries. It is not a general measure. If you, for instance, as importers of Cognac, desired that these Cognacs be imported under that convention with Certificates of Purity, certainly you would obtain it, but it would be convention between the French Government and the English Government and specially to Cognac which could be adopted afterwards with regard to other products as it has already been adopted between France and Germany, for instance, for the exchange of oils or products of the same kind.

15858. Has that already been fixed by convention?—Yes, it has not yet been published, and that is why

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you must not consider what I say as being official. Of course I have not any official character whatever here, but I think the same measures could be taken with regard to Cognac in the system. You can get all particulars about that, and if you asked for them they would surely be given to you. I can give you some information about the general way of acting by that system. Some chemists are entitled to give what we call Certificates of Purity. For instance, if a certain amount of Cognac in casks is to be imported to this country, samples may be taken by the Excise officers which are sent to the laboratory under seal, and the cask sealed at the same time, so that this would procure all that you could wish. You could be sure that the product when it comes is really the product that has been shipped.

15859. In that case you would simply have a reference corresponding to what had been guaranteed?—Yes, I think three samples are to be taken, one of them sent to the chemist who gives the Certificate of Purity, one to your chemist, and one is kept.

15860. That, of course, is in the air at present, but it is based on something being actually done with regard to oil?—Yes, it is in the air as far as Cognac is concerned, but it has been applied to other products already.

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

THIRTY-FIRST DAY.

Wednesday, 10th March, 1909.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Dr. PHILIP SCHIDROWITZ, re-called.

Dr. P. Schidrowitz.

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15861. (*Dr. Adeney.*) You have already assisted the Commission by the valuable technical evidence you have given with regard to whiskey. I should like to know whether you have made a special study of the subject of brandy?—Yes, I have a considerable knowledge and experience of the manufacture, the chemistry, and the organoleptic properties of brandy.

15862. Do you mean by the organoleptic properties of brandy the physiological effects?—No, I mean the effects associated with the sense of taste and smell.

15863. As distinguished from the physiological effects?—Yes. I do not wish to give any evidence on pure physiology or psychology.

15864. Can you give us any information as to the origin of the word "brandy"?—Yes. I think I may take this opportunity of correcting what I think is a very common misconception. It is usually thought that the word "brandy" is derived from the German "Branntwein." There were some interesting researches made by Fairley which he published in the Analyst of 1905 at page 293, and with your permission I will just read one or two passages from that paper. He says: "The modern English word 'brandy' is quite as old as any of its Continental equivalents. As shown by the following examples, it was formerly spelt brandewine, brand-wine, and brandy wine. The word 'brand' is common to all the Teutonic languages of Northern Europe, and means a thing burning, or that has been burnt, so that brandy or brandy wine, meaning burnt wine, is as old as the High German branntwein, the Dutch brandewijn, or the old French brandevin." He gives a lot of examples there, and it may be of interest to the Commission to see those.

15865. How would you define the word "brandy" in its widest sense?—Taking the word "brandy" as an English word and for the moment apart from any geographical considerations I should say that it can be defined as a spirit obtained by the distillation of the fermented juice of any fruit.

15866. That includes dried fruits as well as fresh?—No, I should think not. I had not that in mind.

15867. Fresh fruits?—Yes. But I think that the unrestricted use of the word in this sense without qualification might be misleading. In the United Kingdom I think that the term "brandy" is held to apply only to the spirit obtained from grape wine. I include fruits in the broader definition, because I believe in the large orchard districts in America and Australia the word "brandy" there would probably be held to apply to spirit derived from apples and pears, and so on.

15868. (*Chairman.*) Is there any substantial manufacture of brandy from anything else but grapes?—I think there is in America in the large orchard districts.

15869. But not in this country?—Not in this country nor very largely in Europe; I should think it is infinitesimal. I think for the United Kingdom the term "brandy" applies only to grape wine.

15870-1. (*Dr. Adeney.*) What do you think is the usual meaning attached to the word "brandy" in the United Kingdom?—To my mind I think it means spirit obtained by the distillation of fermented wine made from fresh grapes.

15872. Do you know the definitions given in the British Pharmacopœia?—Yes. In the old edition of the Pharmacopœia—I think it was the Third edition—the heading was "Spiritus Vini Gallici—French brandy." The descriptive text read, "Spirit distilled from French wine. It has a characteristic flavour

and a light sherry colour derived from the cask in which it has been kept." It is the only kind of brandy referred to in the Pharmacopœia, and in the Fourth Edition the heading is "Spiritus Vini Gallici," and the sub-heading is "brandy." They have left out the word "French" there, and the text is "A spirituous liquid distilled from wine"—they have left out the word "French" there again—"and matured by age and containing not less than 36½ per cent. by weight and 43½ per cent. by volume of ethyl hydroxide." Then the United States Pharmacopœia goes into it rather more fully, and there the heading is "Spiritus Vini Gallici"—they retain the "Gallici" everywhere—"an alcoholic liquid obtained by the distillation of the fermented unmodified juice of fresh grapes," and then they give rather a lengthy description of it. I do not know whether you would care for me to go into the details of it?

15873. Perhaps it would be sufficient if you gave us the reference?—It is under the heading "Spiritus Vini Gallici" in the United States Pharmacopœia, 8th Revision, page 421.

15874. I see from your *précis* that you have handed in that you do not wish to give evidence except with regard to brandy that is obtained from grape wine?—That is so. I have practically no knowledge of the other, and I really think it is not a matter of any importance so far as this country is concerned.

15875. You do not think that the admixtures of grape wine and grain spirit are plentiful in this country?—I do not think they are very plentiful at the present day, but I should certainly object to them being called brandy.

15876. Even if you had a large proportion of grape spirit?—Certainly.

15877. Can you name the chief countries in which brandy at the present time, in the sense that you speak of, is being produced?—Yes. Brandy is produced principally in France; it is also produced in Spain and in Australia and California. I think some is produced in Italy, but I think perhaps not very much.

15878. Is any produced in South Africa?—Oh, yes, I believe they do produce some in South Africa.

15879. Do you know anything of the Egyptian brandy?—No, I cannot say that I do. I think I once had a sample that was supposed to be Egyptian brandy.

15880. That you would not include under your definition of "brandy"?—I do not think they have any vines in Egypt so I do not see how anyone can legitimately call anything Egyptian brandy. I had once a sample which was termed "Egyptian brandy," and it certainly tasted and smelt of brandy—it seemed a fairly decent kind of spirit. I should not like to have said there was any grain or anything of that kind in it, but it struck me as being a blend very likely of French or Spanish brandy, or something of that kind, or one of these Mediterranean brandies with a good deal of highly rectified grape spirit—something of that kind which I would also term "brandy" by the way.

15881. Your personal knowledge of these brandy growing districts, I think, is confined to France?—Yes, entirely.

15882. (*Chairman.*) Do we get brandy from anywhere else but France?—We certainly get some brandy from Australia, and, I believe, also some from South Africa, but certainly some comes from Spain. I believe some Spanish brandies are sold fairly widely—at least one sees the advertisements of them in the trade papers constantly.

15883. (*Dr. G. S. Buchanan.*) As Spanish brandy?—Yes.

15884. (*Dr. Adency.*) And Australian brandy?—Yes, but I have not noticed that so much.

15885. (*Mr. J. Y. Buchanan.*) In the Spanish wine districts they have always a still?—I believe that is so.

15886. But they use that, of course, for preserving their wine?—Yes, quite so.

15887. I have no doubt they make brandy too?—Yes, they do.

15888. (*Dr. Adency.*) It is quite evident that the bulk of the brandy which comes into this country is French brandy?—Yes, I believe that is so undoubtedly.

15889. The best qualities of brandy that come from France are from the Cognac district?—Yes.

15890. Can you give us the names of the other districts from which it comes?—The other main districts are, first of all, the Armagnac district, which includes practically the Marmande district, and then to the north there is a certain amount made in the Nantes district, and then to the south in the four districts of the Midi—the Hérault, Aude, Gard, and Pyrénées Orientales—they make what is called the Trois-six de Montepellier. That is the generic name of the brandies produced there.

15891. Do they come to this country under that designation?—I presume that they come as brandy. I do not know that they come under any special designation. I may say this, that the production in those southern departments has, I believe, increased considerably of recent years, and I think that is due to the fact that after the phylloxera the southern growers replanted their vineyards with vines which were not appropriate to the soil—vines which produced very large quantities of wine. They were rather greedy, I am afraid, and they planted them in the plains as well as on the hillsides, and the result of that was that they had an enormous glut of wines which were unstable and decidedly inferior to the wines which they used to grow. One of the results of that was the so-called wine war, which, I think, we all remember—it was the summer before last. Another result has been that a very large proportion of these wines is practically unsaleable, and they go to the still, and it is frequently said that only wines which are diseased, or which have gone wrong, are sent to the stills in these districts. But I think that is undoubtedly not the case now. They cannot do anything else with these wines that are unstable; they cannot vend them; they are inferior to the Algerian and Spanish wines, and the result is that they go to the still, and we get large quantities of these highly-rectified brandies.

15892. Do you know the relative price of these brandies and the better class of Cognac brandies?—I think I do, roughly speaking. I did see some quotations, I think, in M. Rocques' book, and, I think, roughly the value, at the same alcoholic strength, of Cognac brandies compared with brandies from some of these other districts is about 3 to 1, or something like that.

15893. So that it is quite possible to get cheaper blends of grape wines without the use of grain spirit at all?—Undoubtedly. I am rather interested in the subject of industrial spirit, and at the present time I am told by manufacturers of industrial spirit from maize, and so on, in the north of France, that these wine people in the Midi are actually producing spirits somewhat cheaper than that made from starch.

15894. That is, of course, produced from a patent still?—Yes, from a rectifying still. Another reason why the distillers in the North of France complain is that the Bouilleurs de Cru are practically allowed to make their spirit free of duty. There has been some alteration of recent years as regards that, but I think they still go gaily along.

15895. You have, I know, come to the conclusion in your own mind of how "brandy" should be defined. Would you give your definition of "brandy"?—I think that at the present time the view I hold is that brandy is a spirit distilled from the fermented juice of fresh grapes. I think I should like to confine myself to that.

15896. You see there is a danger in that definition?—What you have in your mind is the definition I gave some years ago.

15897. (*Chairman.*) You used the word "France" there intentionally?—Yes, I did some years ago, and I put that in as a matter of fact principally to promote discussion, and in the discussion I stated, at page 149, I was not disposed to be didactic on the point. The definition which I then put forward was, "Brandy is a spirit distilled in France, the volatile constituents of which are derived entirely from the grape, and which contains no added matter of any kind excepting water, sweetening, and colouring matter, and of which the taste and odour are those ordinarily associated with that designation." I think, if we drop the word "France," that pretty well holds at the present time.

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15898. You would not shut out Germany, and so on?—I would not shut them out. The definition I gave was contained in a paper read before the Institute of Brewing, and my reason for putting in the word "France" tentatively was because brandy is an article in the Pharmacopœia, and I believe under the Food and Drugs Act, if there is any question as to definition the Pharmacopœia is referred to, and, therefore, as in the Pharmacopœia the words were Spiritus Vini Gallici—the word "Gallici" was retained, and it had been formerly suggested in the Pharmacopœia that only French brandy was brandy, although it was not put in so many words—I tentatively put that word "French" in to see what would be said.

15899. What do you say now? Do you keep that in?—No, certainly not.

15900. (*Dr. Adeney.*) Your definition has the advantage of excluding a highly rectified wine spirit flavoured with essences?—I had that in view, but I think one's ideas on this subject have developed somewhat, and I have rather come to the conclusion that as far as a spirit produced industrially is concerned you really cannot get anything that is so neutral as to lose its character, and, therefore, I do not think that it is desirable or necessary to introduce any line with regard to rectification. I do not think it is practicable, and I have never yet come across a sample of plain spirit—I mean a sample prepared on the ordinary commercial lines, not a sample prepared in the laboratory—which did not still show some trace of its origin, and if you take a very highly rectified grain spirit on the one hand, and a very highly rectified grape spirit on the other hand, and if you blend each of those with some fine brandy, I think it is undoubtedly the case that you get a different result. Then the brandy which is blended with a highly rectified grape spirit is a much superior blend to that which is blended with grain spirit.

15901. Have you any reason to think that spirits are being imported into this country which are simply highly rectified wine spirits flavoured with essences?—I do not know that I have come across anything of that sort. I have come across spirits where I thought undoubtedly some essences had been added—esters, and so on.

15902. But that was probably only to keep up the analytical standard?—Yes.

15903. Not for flavouring purposes?—No, I think not.

15904-5. As to the method of manufacture, we have had a good deal of evidence as to the character of the stills that are being used in the Charente district. In the other parts of France more complicated and more highly rectifying stills are being employed, I believe?—Yes, undoubtedly. If you go only a little to the north into the La Rochelle district and to the islands, you get a type of still there which is known as the Alambic des Iles, and which is a simple pot still with a rectifying head. That is the type of still to which I referred. Then if you go South in the Midi district you get pretty complicated stills.

15906. What is the object of the use of these stills? Is it this, that the distiller will use stills which give the best results from given materials, or is it wholly that of economy of production?—I think that the distiller will use the type of still which gives him the best results as regards quality and economy for the raw material on which he operates.

15907. So that the question of quality affects the selection of stills quite as much as economy?—Undoubtedly. The wines which are grown in the Bois Ordinaires district, or down in the South, are much rougher. They have more, what is called "terroir," the taste of the earth, and that has to be got out, and you cannot do it in an ordinary pot still. On the other hand the Cognac people have found that so far they get the best results in the simplest type of pot still.

15908. I noticed you refer in your *précis* to the method of distillation in the Cognac district. I think you were here yesterday. Have you anything to add to what was said yesterday?—No, I think you have had all that.

15909. Have you anything you would like to say on the question of storage?—On the question of storage I should like to refer, I think, principally to the question of colouring, because that really is a very important matter at the present time, and it affects not only brandy but it affects every spirit. It affects whiskey to a large extent. It is a question of principle which strikes at the very root of the preparation of potable spirits for sale. The question is a very acute one, because people in this country, and I think people also in France, are having very considerable trouble with the United States on this question of colour. They hold over there, for some reason which I have not been able to fathom, that the addition of any colouring matter except that which is taken from the cask is non-permissible. They hold that colouring matter is merely added as an adulterant to give a fictitious appearance of age. Now I should like to say something with regard to that. First of all, neither historically nor otherwise is there, I think, the slightest basis for that view. They hold that the colour of a spirit should be derived only from the cask in which it is stored, and I say my view is that there is not the slightest ground for that statement. In the United States they colour their spirits very largely by means of a charred cask. In that way you can get a great deal of colour and very quickly. We use different types of casks—I am talking not only of Scotland but of the brandy districts also—and the result is that we get very little colour out of many of these casks. The object of adding colouring matter is a two-fold one. In the case of brandy they add colour and sweetening principally to produce a particular type of spirit which the consumer wishes to have. They also add colour—and this also applies to the whiskey production, and it applies not only to one variety of whiskey but to all whiskies and all brandies—in order to keep a given brand up to a given level of colour, inasmuch as every cask practically will give a different shade of colour, and I think it might be a very good thing if the public did understand that this question of colour is really a very secondary matter. The fact is that very few of the public have a palate and still fewer have a nose, but they all have eyes, and if you give them on one occasion spirit a little lighter or darker than it was before, they think that the spirit is different, and that is the reason of the addition of a small quantity of colouring matter. I have also determined the amount which is added in standard blends or brands and it amounts perhaps on the average in the case of whiskey to roughly 8 or 10 per cent. of the whole colour. If you take the whole colour as 100 units that which is added is 8 to 10 to keep it level. The most extraordinary views are held in America—I do not know why, because they have had full opportunities over here of ascertaining what the facts are—and yet only quite recently a gentleman in the Attorney-General's department at Washington stated as his opinion that we added colouring matter because our Government did not permit us to keep spirits in bond in cask, but they had to be placed in a metal receiver and the result of that was that they did not improve, and therefore we added colouring matter to give them an appearance of age.

15910. (*Dr. G. S. Buchanan.*) Do I understand that your objection is to the definite exclusion of coloured spirits by America and not merely to the declaration that they contain so much added colour?—No, I object to the one and the other because if you say you must declare that colour has been added it conveys a distinctly wrong impression. It conveys an impression to the public mind that this whiskey or brandy is different and that it is now artificial.

15911-2. That is possible, but they are requiring in America, are they not, under their general food law, that colouring matter of that kind should be declared—it is not specially a matter as regards whiskey and brandy. As far as any declaration on importation is concerned, that is quite a different thing to absolute exclusion or threatening to exclude the whiskey or the brandy on the ground that it is coloured. I am not quite clear as to what has been actually happening?—First of all they required that a declaration should be made on the invoice of the goods stating that they were coloured or that they were not coloured. I believe that was done, and nobody objected to that, and now I believe they threaten that unless a notice is plainly put on the label saying that these goods are coloured, or calling them artificial or imitation, or something of that sort, that they will hold them up altogether.

15913. Has that actually happened for that particular reason, because I am not quite clear that it

has at present?—I do not know that it has actually happened for that particular reason, but they have most distinctly over and over again threatened that they will shortly do so. Dr. Wiley goes still further. He holds that if the slightest addition of colour is made, the whiskey must be branded "Imitation," whatever its quality may be.

15914. I understood that colour was part of the difficulty that some of the Continental spirit exporters had had with the American people, but I did not understand that the mere question of colouring had been made the ground of definite exclusion?—I do not think that they have actually yet excluded anything.

15915. That is the only point in the controversy that occurred to me?—They have been making very definite statements recently, that their view of the new food law is that unless a declaration is made on the label they will exclude, and that steps will be taken very shortly in that direction.

15916. Your view at any rate is that colour is essential to the brandy or the whiskey as an ordinary article of commerce?—As a commercial article.

15917. It is like the colour of London milk—it must be yellow or must be uniformly yellow?—Milk is rather a different article.

15918. (*Dr. Adeney.*) Can you tell us anything as to the effect of maturation on grape spirit?—Yes, I think that spirit improves very considerably with ageing. I think there is no doubt about that.

15919. What do you mean by improving?—From the point of view of taste and smell.

15920. Is that the only thing?—I do not quite see from what other point of view you can note any improvement.

15921. You do not think that in the process of maturation added constituents are given to the spirit that did not obtain to the younger spirit?—I think in brandy there is a considerable development of secondary products under the ordinary methods of storage.

15922. It is not only a question of destruction of the constituents having an unpleasant flavour?—No, I think decidedly not.

15923. There is a distinct development. Does that development take place all along the line?—No, I think on the whole the furfural tends to decrease like it does in all matured spirits, and the esters, and the so-called higher alcohols increase very largely apparently. I base that on the figures I have had with very old brandies which show almost enormous quantities of esters and acids, of course.

15924. You get an increase of acid?—Oh, yes, undoubtedly, a very large increase.

15925. Could you tell us what in your opinion is the object of blending these grape spirits?—I think it is purely a commercial question—a question of price. Brandy not being a general beverage, as is the case with whiskey, I do not think that the object of blending there is so much to make a lighter beverage; as is the case with whiskey. I think it is purely a question of price—a purely commercial question.

15926. It is not a question of modifying a too highly flavoured spirit of good quality as in the case of some of the Scotch pot still whiskies?—I think that might perhaps apply in some instances like this: you get these very highly flavoured marc brandies and sometimes these brandies from the north, the Rochelle district, are very highly flavoured, and I think that you undoubtedly get a lighter and more palatable article if you dilute it down with a spirit containing less of the secondary constituents.

15927. Now, I should like to come to the question of the chemical composition of brandy. To your knowledge does there exist any large number of analyses of authenticated brandies?—The number of analyses of what I should call properly authenticated brandies is really remarkably small. There is a considerable series in a work by Girard and Cuniasse, but when you come to go into their tables I think that the number of brandies which are, according to them, beyond suspicion as to origin is only about 25. I have gone rather carefully into their tables. They give a certain number which they call Véritables Eaux-de-vie de provenance connue et certaine, and they give a lot of figures at page 286 concerning commercial brandies which they criticise in one way and another, but concerning which they have no real knowledge, and they merely base their opinion on the analytical figures. Then there is a series in the report by the Lancet Commission.

15928. I think we shall have the author of those before us?—I will merely refer to them. There are about 20 or so. Then there are a number of figures referred to in a report by M. Rocques, who made an official report on this subject to the Minister of Commerce. That report was published in the "Moniteur Officiel du Commerce" for the 30th June, 1904, and in that M. Rocques goes into this whole question of chemical constitution pretty fully, and he gets some very wide variations there indeed. In fact, he finds that for the eau-de-vie de vin—that is to say, the wine alcohols of the Midi and of Algeria—he found the total coefficient varying from 25 to 500.

15929. Were those spirits of undoubted origin?—I think so. This is an official report, and he says this: "Nous avons observé dans leur coefficient," therefore he obviously says he has himself gone into the question personally. Then in his report he comes to the conclusion that it is not feasible to fix either a maximum or a minimum limit for secondary products.

15930. (*Dr. G. S. Buchanan.*) In eau-de-vie de vin generally?—Yes.

15931. (*Dr. Adeney.*) That is in the total secondary products?—Yes. Let me read what conclusion he comes to: "L'exposé succinct que nous venons de faire de la question du non-alcool dans les eaux-de-vie de vin nous a amené aux conclusions suivantes, que nous soumettons au Comité technique d'Œnologie: La teneur en non-alcool des eaux-de-vie de vin varie entre des limites très étendues suivant le mode de distillation qui a été employée pour les préparer. Il ne nous paraît donc pas possible de fixer des teneurs maximum et minimum *précises* au co-efficient non-alcool des eaux-de-vie de vin. Indépendamment du co-efficient non-alcool il y a lieu de tenir compte de l'ensemble des résultats de l'analyse, c'est-à-dire des proportions des différentes substances volatiles et des rapports que ces substances présentent entre elles. De plus, l'analyse chimique devra toujours être complétée par la dégustation."

15932. By the term "non-alcool" he includes what you include as secondary products?—Yes, quite so. It applies to everything that is not either water or ethylic alcohol.

15933. Windisch, I think, has published a considerable number of analyses?—Yes.

15934. Can you give us the reference to the paper?—Yes, it is a paper in the "Zeitschrift fur Untersuchung der Nahrungs-und Genussmittel" for the 15th October, 1904. He publishes a great number of figures, but unfortunately most of them refer to cherry brandy—that is to say, brandies distilled from cherries and plums, and so on, and the figures that he does give are mostly confined to fusel oil, and he has estimated the fusel oil by the German official method, so I am afraid that helps us very little, otherwise this paper would contain a great deal of valuable information.

15935. You have also made analyses yourself?—Yes, I have made a fairly large number of analyses, but the number of analyses of samples which I may call typical, and which I am quite certain are absolutely genuine, is really quite small.

15936. That is owing to the difficulty of getting samples?—Quite so. I agree with what M. Fernbach said yesterday, that if trade and science could be brought into more intimate contact in these matters a little good might result.

15937. You have given analyses of these typical samples in your *précis*?—Yes.

15938. I think all the members of the Commission have seen them, so that you need not go into them in detail?—These are the figures. (*Handed in. See Appendix P.*).

There is one rather interesting point here which is in sample No. 2, which was obtained from a still in the Fin Bois district. It was quite a small pot still with no rectifying head, or anything of that sort at all—in fact it was a very, very small still, but it was heated by a steam coil inside the still, which is not unusual. The esters there were as low as 61. I think, perhaps, I had better go into the question of esters later on.

15939. Before passing away from that I should like to ask you what was the method which you employed for determining the higher alcohols?—In these par-

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ticular cases I wanted to get a comparison with the figures of French workers, and I employed the colorimetric process. Of course, if you employ it, using always the same control, that is from one and the same lot of isobutyl alcohol, and do it yourself in exactly the same way, you get something which is interesting. It does not mean higher alcohols, and I doubt whether it means anything very much, but still I think it is rather useful for brandies.

15940. What substance do you use for control?—These were done with the isobutyl alcohol.

15941. Then as to furfural. Have you formed any opinion as to the origin of that furfural?—I presume that it was originally derived from pentose matter.

15942. And developed in the process of distillation?—I am not quite sure of that. I am not quite sure that some work was not done by Chapman some years ago on beer, and that he showed that the furfural was present in beer as such. I may be able to get a reference to that, but I am not quite certain. You mean that it may be formed merely during the process of distillation?

15943. Yes, and the question is whether you would get it if you distilled in vacuo?—If you distilled in vacuo you would have very low temperatures, and it probably would not come over to any extent as it has a high boiling point.

15944. (*Dr. G. S. Buchanan.*) What is the boiling point?—About 160° Centigrade. You might in vacuo get your alcohol over very quickly—in fact, so quickly that the furfural would not have begun to come over.

15945. (*Dr. Adeney.*) But if you carried your distillation far enough you could separate it from the fixed matter?—Undoubtedly.

15946. I rather think M. Ordonneau is under that impression?—I think I did see a reference to that work once, but I have not been able to find it again. I think it is not within recent years.

15947-8. Then as to the general constitution of these secondary matters. Do you think they in general present any characteristic feature of the wine spirit as compared with the general features of the secondary products of grain spirit or rum?—It is a little difficult to judge because the number of analyses one has is so small and the higher alcohols, for instance, have been carried out generally on different lines, but on the whole it appears as though relatively the esters were rather higher as compared with the higher alcohols than is the case in grain spirit. I think that does seem to be the case as far as we know at present. I was at one time of opinion that the furfural seemed to be rather lower, but I doubt whether that is so because one comes across rather high figures in these tables of Girard and Cuniasse.

15949. Had you any further analyses than those you have given us in your *précis*?—I have made a very large number of analyses of samples generally but they are samples concerning which I have no really authentic data. I have had samples which I have been assured were absolutely genuine wine spirits, and so on, and I have no reason to doubt that it was so, but unless one has actually taken the sample or knows exactly where it comes from I do not think that analyses of that sort are of very much value. I have analysed samples of well-known brandies, and one knows they are pretty well all right, but I do not know that those figures are really of much value. One really wants to know oneself what the thing is.

15950. You quote Ordonneau's well-known analyses or determination of the composition of the secondary products of Cognac brandies. Have you anything to say about those?—I think they were obtained by actually distilling 100 litres of 25-year old brandy. It was not an analytical process pure and simple. The figures are as follows:—

	Grams in 100 litres of Brandy.
Normal propyl alcohol	40·0
Normal butyl alcohol	218·6
Amyl alcohol	83·8
Hexyl alcohol	0·6
Heptyl alcohol	1·5
Ethyl acetate	35·0
Ethyl propionate, butyrate and caproate	3·0
Œnanthic ether (about)	4·0
Aldehyde	3·0
Acetal	traces
Amines	traces

15951. In looking over those results they show a very distinct difference in composition from that which the analyses one is accustomed to see would suggest?—Quite so. The first thing that strikes one is the absence of isobutyl alcohol. I do not quite know how that is—whether Ordonneau is wrong or whether the people who have assumed that the chief alcohol is isobutyl are wrong. I should think Ordonneau is more likely to be right.

15952. I should think so?—Then another thing that strikes one is the presence of œnanthic ether, which is believed to be present only in grape spirit, but I think that even regarding that there is some question as to whether it is so.

15953. He refers to no furfural there?—No, he says aldehydes, and whether that includes furfural I do not know. I believe this analysis was done many years ago.

15954. Then we come to the ether standard. Could you state what that is shortly?—Some years ago—I think it was in 1904—a case was decided in the Courts.

15955. I think probably we shall have evidence with regard to that case. Could you state what the standard is?—It was not actually laid down as a matter of fact by Mr. Fordham at all, but the suggested standard was that a brandy which did not contain 80 parts of esters per 100,000 parts of absolute alcohol was not genuine brandy.

15956. (*Dr. G. S. Buchanan.*) On the assumption that brandy should be derived from the juice of the grape?—Yes, and I think there was a further assumption that it should be distilled in pot stills. I think that that standard is absolutely untenable if we confine ourselves to the juice of the grape, and I am afraid it is also untenable if we confine ourselves to pot stills.

15957. (*Chairman.*) What standard are you speaking of?—The ether standard.

15958. Who is the author of it?—The author of it was Mr. Fordham, the magistrate in the brandy test case. I do not think, as a matter of fact, that Mr. Fordham ever did lay that down as a fixed standard; he merely suggested that possibly legislation on that subject was desirable, and if so that legislation might take the form of a standard of this kind, but the practical result of that statement of Mr. Fordham was that the whole trade acted upon it, or tried to act upon it, and innumerable prosecutions took place all through the country on the basis of this standard.

15959. On the basis of that decision you had better say?—Yes—that decision.

15960. (*Dr. Adeney.*) You do not agree with the standard?—No, I do not agree, because it is purely a question of fact.

15961. (*Chairman.*) Mr. Fordham could not have imagined all this out of his own mind. Was that the evidence put before him?—I presume so, but I was not present in that case.

15962. (*Dr. Adeney.*) What in your opinion has been the general result on the quality of the brandy? Has it had any result on the quality of the brandy?—I think that the result at first was rather a good one. People who had been sinning rushed to cover, and then I rather think later on they found that as an alternative to virtue there was the alternative of not being found out, and they did that by putting in these esters artificially. Now, I think the result is probably a good one as far as many of the large firms are concerned, because when a matter of this sort comes up before the general public I think they rather tend to go to well-known names and leave the smaller people of whom they are not quite so sure. I rather think the tendency has been a good one from the point of view of some of the large firms in the trade, but I am afraid that everywhere the result has not been a good one. It has led to a form of adulteration which previously did not take place. I think it is admitted on all hands that these ethers are being manufactured and also higher alcohols, and are being put in. I might perhaps say this on the question of fact of that figure of 80, that I have myself come across brandy from the Cognac district made in a pot still containing as little as 61, and then if you will look at the evidence before the Select Committee in 1891, on page 101, there are two brandies which were analysed by Dr. Bell, the Chief Government Chemist, and he said: "I thought the Committee might wish to get some idea of the composition of genuine brandies, and I succeeded in get-

ting two samples on which I could rely, and these are the results." Then he gives these two results, and he works them out in percentages, but I have worked them out to our method of calculation now, and the two results he gave of compound ether is in the one case 104 and in the other case 52.

15963. One is above and the other is below?—One is above and the other is below. I assume that Dr. Bell in his position would not have made that positive statement as to their being genuine unless he had very good reason for making it. Then there are several other cases on record. There is a case in Girard and Cuniasse on page 286, an Eau-de-vie de Saintonge, 1896. An authenticated wine brandy from the Bons Bois district, with regard to which he gives a figure of 61·9.

15964. That would have been regarded as a spurious brandy?—Yes, and so would the brandy which Dr. Bell referred to in his evidence. I may say this, that of course there are also the figures given by M. Rocques in his report which naturally go much lower than that. I think that rather involves a question of the still. If one admits that the pot still is not a necessity, then that 80 standard disappears absolutely, but it does not hold good even for the pot still.

15965. I see on some of the analyses handed in by Dr. Fernbach yesterday some of the Cognac brandies come below that standard?—Yes. I have already given some examples, and there is another one in the Lancet Commission's report on page 1511, and that is 53·8. I might say this, that it has been suggested that analysis is of no value at all in these matters, and that it rather does harm. But I certainly should demur to that very strongly.

15966. I am glad to hear you say so?—Very strongly indeed. What I do think does harm is the idea that by a single analytical figure one can determine a large question of this kind. That was based on very, very rudimentary knowledge. The number of analyses was very small, and we have found out since then that the variations are a great deal wider than we imagined they were, but I do think this, that if one takes all the analytical figures of a brandy together and takes those in conjunction with tasting, and so on, you can get at all the evidence you want to, and I may say this also, that the analysis in many cases is more valuable than tasting. The taster is by no means so certain as he sometimes pretends he is. The taster's work is very remarkable when it is of a synthetic character—that is to say, the putting together of things, but when it comes to saying whether a thing is such and such an article, whether it is genuine, he is very often at fault, and for this reason, that the slightest mishandling of the article—if it has been put through a dirty funnel, or something of that sort—will put him entirely off, and in that case analysis is exceedingly useful. I have cases like that, I may say, almost every week. I am often asked to control the character of spirits which are taken in various places, and to see whether they are genuine or not. I taste them first of all, and then I analyse them, and frequently I find that there is something wrong with the taste, and yet the figures come out absolutely as they should do, and it turns out in such cases as a matter of fact that probably the bottle has been left standing open, or it has been poured through a dirty funnel, or a cask or a cork has been defective, or something of that sort has happened, and that is where the taster is absolutely at fault.

15967. Perhaps you could answer this question. We heard yesterday that some of the large importers into this country endeavour to import case brandy of a uniform flavour. Have you had any opportunity of analysing those brandies of uniform flavour?—I have analysed them, but not sufficiently repeatedly to see whether they are of a uniform composition, but I have in the case of whiskey, and it is very very remarkable in the case of whiskey how some of these standard blends keep level in their analytical figures.

15968. I have found the same thing in, at any rate, one class of brandy?—Therefore I think you will agree that analysis is very useful in many cases.

15969. I think it should be down in our Minutes from an expert like yourself that there are reasons why chemists should differ in the results they obtain even with the same spirit. Those reasons are because we are not agreed as to all the details in the operation of analysis?—Quite so.

15970. And it is absolutely necessary that those details should be agreed upon?—I quite agree, but I think I may say this, that within recent times, within the last year or two, I think the few of us who have occupied ourselves considerably with these matters are getting, as a rule, figures which are pretty comparable.

15971. We shall live up to it?—I think, perhaps, one essential is that we should all use quariz flasks for distillation, and so on. I believe that many of the differences are due to the glass vessels which are employed.

15972. We really require official methods with all the details fully described?—Undoubtedly.

15973. That leads up to an opinion you expressed when giving evidence on the subject of whiskey. You referred to the value that it would be in cases of this kind if we had some Central Board which would take into consideration the question of official analyses and definitions?—I think it is very highly desirable. I think it is most highly desirable in connection with legislation under the Food and Drugs Act that there should be some authority to form a standard. Really, at the present time sometimes the methods which are adopted for arriving at a standard almost savour of comic opera. I do not think it does the Food and Drugs Act any good—I mean to say the Food and Drugs Act as such—and I do not think it does the objects which the Food and Drugs Act has in view any good. I think that there certainly ought to be some Central Board or competent body for making standards, and the public analyst then should merely apply that standard. I think that is highly desirable from many points of view.

15974. The public analyst should not be in the position of making his own standard?—No, certainly not. I think that it is very highly objectionable from many points of view, and I think the great body of public analysts would agree with me in that.

15975. Do you think such a central body as you have been referring to would have the effect of keeping up the quality of articles of food and beverage?—I think so undoubtedly. I should like to say this, that if it is not found expedient to have a body of that kind, then in any case where a standard is in question, and where the laying down of a standard is in point, the case might be tried before a High Court judge sitting with assessors as they do in the Admiralty Court—with scientific or technical assessors. I suggest that as an alternative to the Board, although I think the Board would be a great deal the better way of doing things.

15976. I now come to the last question on which you propose to give evidence. You wish to draw attention to the use of brandy as medicine, and to make some suggestions?—What I had in my mind was this: Brandy differs from other spirits in that it is officially in the Pharmacopœia, and it appears to be used officially as a medicine. Brandy undoubtedly does vary enormously in its taste, in its flavour, and in regard to the quantity of secondary substances that it contains. If you look at that table of mine (*see Appendix P*) you see I have there some old brandies which contain getting on for 1,000 parts of secondary products, that is to say, nearly a half per cent., whereas in some of the better brandies you only have about one-third, say, of that quantity. If there is any reason for brandy being in the Pharmacopœia at all, if there is any reason for the assumption that it is better as a medicine than any other spirit, surely then the basis of that reason must lie in the secondary products which it contains. Otherwise why not delete brandy from the Pharmacopœia and simply put in ethyl hydroxide? If there is anything in this contention that the secondary products are valuable in the case of collapse or as a narcotic, or what not, then it appears to me that the definition of brandy should be rather a closer one than the definition as it stands at present. It should go into more detail, and I think it might be worth while to make some reasonable experiments to see whether there is over a large number of cases a large difference between brandy, say, four or five years' old, containing a moderate quantity of secondary constituents, and, say, a very old brandy containing a very high quantity, and noting whether any one of the individual constituents has an undesirable effect. For instance, we

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find in these very old brandies a very large amount of aldehydes frequently. Now that might be objectionable, because here you have one containing as much as 55. I have had them up to 100. That means about ·1 per cent. I do not care to speak as an expert on this subject, but merely as one who has thought about it a little, and it seems to me if any of these substances either as such or conjointly are physiologically active that it is worth considering and going into and worth drawing a line.

15977. So far as you know such work has not been done?—I do not know of any at all—absolutely none, but it seems to me that either one of two things must be done—either you delete brandy from the Pharmacopœia or you give some good reason for leaving it there.

15977a. (*Mr. J. Y. Buchanan.*) With regard to what you were saying just now you have in the Pharmacopœia rectified spirits?—Yes.

15978. If it is ascertained that any of these or all of them, particularly the secondary products, esters and ethers and aldehydes, are valuable for medical purposes, would it not be more simple for the medical man to make up a prescription and to make up a brandy if he calls it so from rectified spirit with the necessary esters that are there?—I am afraid not, because our knowledge of what these things are is still somewhat rudimentary.

15979. But supposing he had the knowledge which you suggest should be obtained?—No, I suggest that experiments should be made with brandies and not with these particular things as such, because I am afraid we cannot isolate them as such.

15980. (*Dr. Cushny.*) Do you suppose that brandy is ever prescribed from the Pharmacopœia as one prescribes an ordinary remedy?—I really do not know, but I presume there was some reason for it being in the Pharmacopœia and being retained in the new edition of the Pharmacopœia.

15981. I am afraid it would be very difficult to give reasons why things are retained in the Pharmacopœia. There is a new edition being prepared at present, and the British Medical Association has recommended that brandy should be left out, which rather removes some of your argument?—Quite so.

15982. (*Chairman.*) I want to pursue this ideal of yours a little with regard to the standard question. You say it is a difficult task for the public analyst to give a definition of what represents purity?—Quite so.

15983. I suppose there may be almost thousands of articles which may be the subject of prosecution under the Food and Drugs Act as being impure and adulterated?—Quite so.

15984. Is it your idea that someone is to erect a standard of purity in respect of these thousands of articles?—I think the number of articles regarding which there can be any really serious question is not so very large, and I think that when a question of that kind crops up as regards a standard for butter or bread, or for whiskey or brandy, or things of that sort where very large interests are involved, and where it is a question rather of misdescription than of adulteration, there would not be much difficulty about it.

15985. You must be businesslike, and if you are going to have a standard you must have a standard all round. You cannot pick out your articles for the standard. Who is to create the standard and lay it down?—My view was this, that a special board should be created such as they have in other countries, and that when a question arises as to whether a certain article should have a certain composition or not, or whether it should have a certain name or not, or whether it should contain certain ingredients, then the matter is referred to this technical and scientific board and they determine the question.

15986. For all time?—For the time being.

15987. Take your case of brandy. It will not do for the time being, because that will be a matter for prosecution. If you erect a standard of what constitutes brandy it must enure. You cannot put it on on Monday and take it off on Thursday. It would have to become the law of the land?—Yes, I should suggest that, certainly.

15988. You must have it not only with regard to one subject, but on all subjects likely to be the subject of prosecution, and you must create a board which shall begin to lay down a standard which shall be put in a Statute and become the law of the land. Do you think that is practicable?—I think so. It is done in other countries.

15989. This is a free country. Do you think the trade would like it?—I think the trade would like it a great deal better than having these questions decided in the police court.

15990. (*Dr. G. S. Buchanan.*) Were you here yesterday when Mr. Hennessy was telling us about the French law?—No, I am afraid I did not hear his evidence.

15991. I think your point rather was that the board you had in mind would make its definitions or recommend its methods for general purposes of administration of which a prosecution would be merely incidental, and perhaps a less necessary part of the procedure than it is under the Food and Drugs Act?—Quite so. I think that magistrates at the present time would be very glad to have the ruling of a board of that kind, and so would public analysts.

15992. To go back to your definition of "brandy" generally, you think that a spirit which consists of a wine brandy mixed with grain spirit, or mixed with beet spirit, is sufficiently distinct in origin and character from a spirit which is entirely of wine to deserve some special name or some special definition?—I think so, decidedly.

15993. You think that that is in the interests of the trade and the consumer?—I think so, undoubtedly.

15994. These proceedings under the Sale of Food and Drugs Act that we were speaking of in so far as they had that object you would agree with?—Quite so.

15995. Your objection is to the methods of applying analytical data and to the results which follow as you have told us?—Quite so.

15996. Then as to distinctions between Cognac and brandy which is entirely derived from wine, but contains, say, a highly rectified wine spirit in some proportion. I think you told us that as regards cost the Cognac may be about three times the cost of the other spirit?—Quite so.

15997. We were told that the French Administration is now insisting upon a difference in description, and that the word "Cognac" can only be applied to what is entirely Cognac?—That is so.

15998. And they are taking administrative measures for that purpose? Do you think that action is also desirable?—I think it is most desirable.

15999. You gave us M. Rocques' opinion as to the impossibility of fixing exactly the maximum and minimum values for the non-alcoholic co-efficient of eau-de-vie de vin. You were applying that, I understand, to unknown samples rather. The point is that the difficulty of fixing the precise maxima and minima is a practical difficulty if you are receiving unknown samples and asking whether they are wine spirit or not?—Quite so.

16000. But I understand that from your own work in brandy, and also in whiskey, you are of opinion that the examination of comparative samples will do a great deal in determining whether the spirit is wine spirit or not?—I would rather put it in this way: it will determine whether a particular sample is a certain spirit or not; that is to say, supposing we have a sample of brandy, Messrs. So-and-so's brandy, which is a standard mark, or Messrs. So-and-so's whiskey, and you are asked with regard to a certain sample, "Is this their brandy?" or, "Is this their whiskey?" then if you have experience of these particular marks you are able to say with almost absolute certainty whether it is correct or not.

16001. And any administrative system for controlling descriptions should take account of that possibility of chemistry, should it not?—Undoubtedly. I think that chemistry can do a great deal more than many of these gentlemen in the spirit trade will admit. I think if they had availed themselves of suggestions that were made some five or six years ago they would have saved themselves and everybody else a great deal of trouble.

16002. My inquiry was rather whether it would also have assisted the Pure Food Administration as well as the spirit trader?—Undoubtedly, but the cases which

I have in mind would almost more be cases under the Merchandise Marks Act when you are selling the goods which are not the goods they purport to be.

16003. (*Dr. Bradford.*) You are in favour, I understand, of limiting the term "brandy" to a spirit obtained by distillation from the wine of the grape?—Yes.

16004. Are you at all familiar with whether the word "brandy" has been used by the Legislature in this country with any other significance attached to it?—I believe it has been used in connection with a corn spirit.

16005. That dates from a very long time ago, does it not?—Yes.

16006. There was an Act in 1690 for the encouragement of the distilling of brandy and spirits from corn?—Yes.

16007. In another Act, the Spirits Act of 1860, the term "British brandy" is used, is it not?—Yes.

16008. For a spirit which is not derived from grape?—I believe that is always sold with the qualification "British."

16009. You would draw a distinction between "brandy" and "British brandy"?—I would, most distinctly.

16010. How would you meet the case of the brandy distilled in this country from wine?—I think that would be brandy if it was distilled in this country from wine, but it would not be Cognac brandy.

16011. So that the word "brandy" has been applied in the past to other spirits than those derived from the grape?—Undoubtedly, but I do not think it has that significance in modern language at all. I think if you speak of brandy nowadays to any man who has ever heard of the article he will associate brandy with the grape. I think there is very little doubt about that. If it ever had the significance to which you refer then it was applied to anything as they apply the word "branntwein" in Germany to any potable spirit.

16012. (*Chairman.*) Do you know anything about the British brandy?—I have had to examine one or two samples.

16013. It is not grape?—No, I do not think so. I would rather not say anything about it. I do not think there is anything harmful in it, but it certainly is not a very beautiful beverage to my mind.

16014. (*Dr. G. S. Buchanan.*) Historically there is a similar justification for calling grain spirit as made in this country brandy as for calling it whiskey?—What I have in view is the modern significance of the word.

16015. That is another matter, but historically a case can be made for the use of the name?—Yes.

16016. (*Chairman.*) You seem to have a delicacy of touch with regard to these ingredients. Why should it be called "brandy"? Is it a habit of trade? Why not call it whiskey if it comes from cereals? What does this British brandy come from?—I think it is a cereal spirit generally.

16017. But why is it called brandy instead of being called whiskey?—I really do not know. It certainly does not resemble brandy to my mind in any way, but it has been prepared in a certain manner, probably from grain spirit with flavouring essences. I really do not know why it is called brandy.

16018. (*Dr. Bradford.*) Did not the Act of 1860 apply the term of brandy to any flavoured spirit?—Is that a flavoured spirit as distinguished from a compounded spirit?

16019. I am asking you?—I really do not know.

16020. (*Dr. Adeney.*) British brandy was a term used in the market before whiskey was much used, was it not?—I really know very little about British brandy. I know I have occasionally examined samples.

16021. It has been known in the trade for some years past, has it not?—I should think so—oh, yes, it has been known for many years undoubtedly.

16022. Probably before whiskey became the accustomed drink as it is at present?—I should think that is quite likely.

16023. (*Mr. J. Y. Buchanan.*) You were saying just now in Germany they use the term branntwein for all spirits there?—For every potable spirit practically.

16024. But I do not think they speak of Cognac as branntwein. I think they always use the term Cognac Brandy whether it comes from Cognac or not?—They use the word Cognac in connection with a letter class wine spirit.

16025. And if you give a man a glass of brandy and he called it branntwein, and it was really Cognac, you would not like it?—You would not ask a man if he was dining with you if he would have a glass of branntwein, you would ask him if he would have a glass of Cognac.

16026. He would be offended if you asked him to have a glass of branntwein?—In the same way that I should be offended if I were asked to have a glass of brandy and I was given British brandy.

The witness withdrew.

Mr. William Pheysey called.

16027. (*Chairman.*) We have had the pleasure of examining you before, and I think we learnt then that you were the manager of the wine and spirit department of the Army and Navy Co-operative Stores?—That is so.

16028. Will you just repeat what your experience has been?—I have been a great number of years in the wine trade, and for about 25 years I have been the manager of the wine and spirit department of the Army and Navy Stores. I have been about 40 years in the trade altogether.

16029. Have you had to deal with the commodity brandy in your experience?—Largely.

16030. Take the Army and Navy Stores. Do you get it wholesale and have it in from Cognac or where do you get it from?—We buy it from Cognac wholesale.

16031. Does it come to you in cases of bottles or in casks?—It comes to us in casks and in bottles.

16032. Will you tell me generally does the greater proportion of the brandy that we get from France come from Cognac?—Yes.

16033. Do you put Cognac as the higher quality of brandy?—Certainly.

16034. That depends on the soil and climate like the wine from the wine districts?—Entirely.

16035. Can you give me from your practical knowledge any definition of what you would call brandy?—I have always considered brandy as the product of the distillation of wine properly made distilled in the pot still.

16036. Do you understand they ever use the patent still at all in France?—In the Midi and the Southern districts they do.

16037. But that does not apply to Cognac?—No; they have modifications, but not the patent still.

16038. If they are using it in the Midi is there any great proportion of brandy that comes from the Midi made in the patent still?—It is not generally acknowledged as coming from the Midi. It might be used in Cognac to blend with Cognac spirit, and re-shipped from the Charente.

16039. But I am on the question of the patent stills. Do you know what proportion at all is manufactured by the patent still?—A very large quantity.

16040. And it is sent over here as brandy without blending?—Not unblended. It is used blended.

16041. It is the same with whiskey almost. What do you say when it is blended? First as to the subject of sale. Is it marketable?—Not as it comes from the stills.

16042. I am speaking of the blend?—It is marketable here.

16043. Taking a blend what sort of article is it?—It is a strong cheap style of brandy. It obtains its flavour from that with which it is blended.

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16044. Take the ordinary customer who is accustomed to take a little brandy in moderation. Would he know the difference between the blend and the Cognac?—It would depend very much indeed on his education.

16045. A taster or an expert would know?—An ordinary consumer belonging to the better middle class of consumers would be accustomed to the better flavour. The poorer man would be accustomed only to these mixtures, and he would not know any difference.

16046. It is cheaper?—It is cheaper.

16047. Is there any difference in respect to the effect on the constitution of the consumer?—That is more a thing for the doctors to speak upon. It is very difficult for a layman to give an opinion on that subject.

16048. I understand you do not sell it?—No.

16049. But as far as you know of it, would it go at all against your conscience to sell it as brandy?—Yes.

16050. Why?—Because I do not consider it is brandy. My definition of "brandy" rules out the produce of the patent still, which has had all the properties of brandy taken out of it practically—it is almost plain alcohol, and I should not call that brandy.

16051. You have very nearly explained what I wanted in that answer, and perhaps you would give it a little more in detail. What do you say are the different effects of distillation by patent still as compared to the pot still?—The pot still gives you all the so-called impurities, the different ethers and oils, but the patent still takes everything out of it. It does not take everything that is bad out of it, because sometimes spirit which is made from wine which has become a little vinegary will be put through the patent still, and they get a spirit from it, but there is always a little acetic flavour with it which is always more pronounced by the distillation. Many distillers make that great mistake of sending their wines that are slightly what they call piqué to the still, and you get a wine spirit which is a little acetic at the back of it—a little vinegary.

16052. In the patent still do you get pure alcohol?—As near as possible you can get pure alcohol.

16053. If that were drunk pure and unblended, according to you, would that be injurious to health?—I could not say from my own experience. I should not like to say that.

16054. You leave that to the medical men?—Yes, I do not think it could be very wholesome.

16055. But blended, as we have heard, with Cognac, there would be no injurious effect then?—It would have it in the same degree according to the amount of blending that you give. If you put it half and half it would not be so injurious, or might not be so injurious. If you put only a small proportion of Cognac brandy simply to give it a flavour and to imitate the real thing, it might be more or less injurious.

16056. That is, if it be injurious according to what the medical men say?—Yes.

16057. But the more Cognac, according to your view, gives the standard of purity?—Yes, certainly.

16058. Is it your impression that there is a good deal of this blended brandy that comes over?—Yes.

16059. Do you think it is so objectionable that you would stop its sale?—I should not stop it, but I think that the purchaser is entitled to a description of what he is buying, because otherwise it is rather a fraud on the consumer. He may have brandy placed before him, and he thinks he is getting something very good and very correct. It seems, to use a more humble simile, like a man going into a shop and asking for butter and being supplied with margarine.

16060. First let me ask you is there a sale of a good deal of brandy, what we call over the counter, in public-houses?—Yes.

16061. A man who is in the habit of drinking brandy knows what he likes, and if he goes into a public-house and asks for a glass of brandy he may receive good Cognac, or he may receive this blend?—Yes.

16062. Asking for brandy he would not say, or not frequently say, "Give me Cognac," but he would simply say, "Give me brandy"?—Yes.

16063. If he did not like what was given him would he not be likely to go somewhere else till he got what he did like?—Yes, he would no doubt go to the public-house that suited his palate and his taste. He would leave the house that served him badly, and he would go to the one that treated him properly and gave him as near the right article as he could expect to get.

16064. That is automatic regulation?—Yes—the taste of the consumer, which is not a bad criterion.

16065. And the publican feels the effect of it?—Certainly.

16066. Will you give us the advantage of your practical experience? Take the case we have just put, of the two glasses of brandy and the knowledge of the man over the counter. What is the information and in what shape is it to be communicated to the customer?—That is a very difficult question, my lord. It is almost impossible to guard the consumer against the fraud which is perpetrated upon him, but if there are regulations laid down and carried out by the Excise (it would add a great deal to their duties, no doubt), they could prevent the selling of adulterated spirits to a very large extent.

16067. But we are on this subject of the blend. You would not call that adulterated, surely?—It is an adulteration.

16068. I was speaking rather of the blend not injurious to health?—Perhaps I will not make use of the word "adulterated." I will call it blended spirit. It is very difficult indeed to give the purchaser notice of such a blend. I do not see how it can be done.

16069. I think the whole Commission would be very glad to find a way in which it could be done, and if you could assist us we should be indebted to you. Fraud or misrepresentation is always objectionable. But there is this difficulty in it. The publican has got two bottles—Cognac in one, and the blend in the other. A man comes in and says, "Give me some brandy." He does not know the difference between the blend and the Cognac—by name, at any rate—he only knows it by taste. What is to be done in order to check what is misrepresentation but what is probably only selling at a dearer price the cheaper article?—I do not see how the thing can be prevented, my lord, because the publican may put the blended spirit into a bottle and it is sold over the counter to the customer; he asks no questions, but he simply swallows it. He may think it is nice or he may think it is very nasty, but I do not think there is any possibility of checking possible fraud on the part of the publican.

16070. I am sharing your view as to the difficulty, but at present a man is only punishable if he sells as article A what is really article B. Would it be possible to do something in the way of saying that if a man put article A into a receptacle which in itself represented it was article B (that would be putting the blended brandy into the Cognac bottle) that that should be an offence?—Yes, it should be.

16071. That is the direction of your mind, if anything is to be done?—Yes, that should be done. If the publican is compelled to keep a separate stock book and he is compelled to label the spirit and to keep it in a bottle, or something of that kind, it would be a little protection, but if a man is inclined to be fraudulent I think even that could be evaded.

16072. At the present time there are a good many licensed houses in the country. It would add very much to the labours of the Excise?—It would be a tremendous labour for them to do it, but that is the only way in which I can see that the public could be protected. It would be throwing a great responsibility and a great labour upon the Excise.

16073. (*Dr. G. S. Buchanan.*) You mean protect the public against any possibility of their getting the wrong article?—Yes.

16074. I do not know if you were here yesterday and heard Mr. Hennessy's evidence?—No, I was not present.

16075. Some similar questions were put to him in connection with the operation of the French law. He said: "We do not profess to stop all fraud; people can defraud"; but he said: "We do not profess to stop it any more than we can stop burglary, but we have police to prevent burglary increasing, and we have a service and regulations with the object

of preventing misdescription, and we believe that is having an effect"?—Yes.

16076. In France, for example, in dealing with the sale of oils under their new system they require all vessels to be labelled with a statement as to what designation the oil was sold under?—Yes.

16077. And they check that by means of their system of administration?—Yes.

16078. Mr. Hennessy said they had not reached that point in their new legislation with regard to spirits, but that they had made some progress in the matter of requiring that the particular term such as "Cognac," when used at cafés and other places was used in the right sense, so that if a man asks for Cognac in Paris he is expected to get Cognac, and there is the machinery for checking it?—Yes.

16079. As to the publican it is a fact, is it not, that the publican in many parts of London already gives some declaration by notice not as to what his brandy is, but what his brandy is not?—I do not know that that applies to brandy. I cannot say.

16080. We have had it in evidence, and personally I have seen in bars, conspicuous notices put up with the object of keeping the publican entirely clear from any operation of the Sale of Food and Drugs Act, to the effect that no spirits or no brandy sold in this establishment is guaranteed to be the product of the distillation of grape juice?—Yes, I have heard that there is such a notice.

16081. "The brandy at this establishment is not sold as grape brandy." That, I think I am right in saying, is extremely common?—Yes.

16082. I am only speaking from recollection, but an inquiry was made in the County of Middlesex lately, and in other places, in which they found that such notices as regards brandy and whiskey were exhibited in something like one-third, if not half, of the public-houses in the county?—Yes, I remember now that that is so.

16083. If it is to a publican's interest to put up notices of that sort with regard to what his brandy is not, surely it is possible and conceivable that he might put up a notice to say what his brandy and whiskey is, if there was a distinct understanding as to the meaning of particular terms as applied to brandy or whiskey?—Yes.

16084. At all events, that is worth thinking of as regards a means of protecting the consumer, is it not?—Decidedly. You could protect the consumer by insisting that all deliveries of brandy to him were made in bottles bearing labels, as I believe they have them in the United States now, stating the composition of the spirit.

16085. That is a further point. We were speaking just now of what was given in a glass out of the urn. But now as regards the bottle. The bottle trade in brandy, I imagine, is rather a large one as compared with the draught trade not only in public-houses, but in the case of wine merchants and grocers?—Yes.

16086. I do not know, but I should have thought that the greater bulk of brandy was sold in bottles?—Yes, perhaps it would be.

16087. In the case of the unopened bottle your opinion is that a distinction should be made, or should be insisted upon between a brandy which was entirely the product of the distillation of fermented grape juice and mixtures, such as the Chairman has asked you about?—Certainly.

16088. Can you suggest any name under which those mixtures should be sold? Do you sell them in the case of the cheap brandies at the Army and Navy Stores?—No.

16089. Not at all?—No.

16090. Would you allow them the word "brandy" if qualified in any way by the term "mixed brandy," or something of that kind?—Yes, if qualified, but there must be a qualification which must not disappear when it is passed over to the consumer.

16091. (*Dr. Adeney.*) You seem to think that the Excise is the only department that could possibly check fraud, or help to check fraud, on the consumer in cases of the across-the-counter trade in public-houses?—Yes.

16092. Do you know anything of the French food law?—Very little.

16093. Do you know they are attempting that by an additional department?—Yes.

16094. Do you not think we require an additional department in this country for a similar purpose?—Most emphatically I do think so.

16095. So that the Excise are not sufficient of themselves?—It would be throwing a very arduous duty upon them, and there should be another department dealing with all these things both with regard to foods and also with regard to liquids that are sold to the public.

16096. A department to which would be referred questions of definitions?—Certainly. It is badly wanted.

16097. Matters of chemical analysis?—Yes.

16098. And such a department as that would undoubtedly tend to keep up the quality of foods and beverages?—Yes. I myself am greatly responsible for the law against frauds in France, because in 1905 I ventured to make some very strong remarks at a meeting of the wine merchants and distillers in Liège, and I am proud to say that what I laid down there in my speech was adopted in almost every country—certainly in France, and all the districts in Germany. It was translated into almost every European language, and I am pleased to say it has had a very great effect upon putting down frauds with regard to wines and spirits.

16099. You have no hesitation in recommending such machinery for this country?—Not the least. It is badly wanted.

16100. Such a machinery could act in conjunction with our Excise?—Certainly.

16100*a*. And it would relieve our Excise of any necessity of doing duties which are really foreign to their purpose?—Yes. The only thing with regard to brandy, and any spirit whatever, is that if they found upon a publican's premises plain spirit, or anything that was obviously to be used as an adulterant, in the same way as if they find salt and water or mixtures going into beer, prompt action is taken and the publican is punished. That may go a long way towards preventing mixtures which would be made by the publican on his own account in his own cellar. They could help in that degree without very much trouble.

16101. (*Mr. J. Y. Buchanan.*) If any department of that kind were formed to take such measures, do you think that would be at all effective in preventing the supply over the counter to a customer of drink such as he did not ask for. Supposing when the bottle of Cognac is opened the publican might put down the bottle with the label and still it might contain a blend or an inferior spirit?—Yes, if the publican were dishonest he could (there is nothing to prevent him doing it) fill up that bottle with an inferior spirit, but if his spirit stock book is watched by the Excise officer the Excise officer would say: "What has become of all this plain spirit? What have you done with all this spirit which is in this permit here which has been delivered to you?"

16102. Then the principal activity in this department would be to control the stocks of the spirit seller?—Yes.

16103. But unless it completely controlled the stock which was in the spirit-dealer's premises it could never prevent fraud on the over-the-counter customer?—No, it is impossible. You find in France especially that a great deal of that goes on, and in Italy, and all those countries, although their laws are supposed to be most excellent. It still goes on. It is better than it was most certainly, because the fear of prosecution is now more before their eyes, and so they are more anxious as to how it is done.

16104. But if the department did find or suspect that something of the kind was done how would they find out? It would only be by controlling the stocks or by analysis?—Only by controlling the stocks.

16105. Then it would come to be a prohibition to the licensed victualler from keeping anything but a certain limited variety?—Of course, really, he has no business to have anything on his premises of that kind.

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16106. But it might be what you call the blended Cognac, which is a perfectly legitimate thing?—Yes—that he could have.

16107. And then he could still, notwithstanding that, have a bottle with a Cognac label on, which had Cognac in it, but which had been filled up with the other spirit?—Yes. That could only be done by insisting that all deliveries by publicans and retailers over the counter should be made in bottles or in vessels which are properly described and labelled.

16108. But I suppose the only way of enforcing that would be to have a regulation not only for the liquor that the man buys in the bottle but for the surrender of the empty bottles?—Yes.

16109. But that, I suppose, you would find still more difficult?—Very difficult indeed. There have been several trials to make unfillable bottles, and I have seen some very clever things indeed where it was absolutely impossible to fill the bottle, but you simply drill a little hole in the bottom of the bottle and the thing is done.

16110. Even that would not be necessarily effective?—I have examined all those things *ad nauseam*.

16111. Is it your conviction that the over-the-counter customer must depend on himself?—He must greatly.

16112. (*Dr. Adeney.*) In the case Mr. Buchanan has been putting to you of the customer getting a glass of Cognac brandy over the counter, and being served from a bottle having a Cognac label, but getting a blend, if a department such as you have started was in existence, and if the chemical composition of these things could be properly investigated, would not that department be able at least to give some help in a case of that kind if samples were submitted to it for examination by taste and chemical analysis?—Certainly.

16113. And by reference to the Excise records?—Yes. I contend that if the Government of this country instituted such a department as they have in the United States, which has been working for some years, and which has arrived at very important results, it would help us enormously, because we could always apply to them, and researches would be made into the mystery of the bottles of wines and spirits. At the present moment, with all deference to analysts, we feel very much at sea with regard to depending on what they say, because they dispute so much amongst themselves on the subject, but if you had a department there would be research constantly going on, and no doubt something could be ascertained on which we could rely.

16114. And then if that reliance was forthcoming, the consumer would be greatly protected?—Enormously protected. They have made great alterations indeed in Bordeaux, through the investigations made by the Department of Agriculture in Washington. They have put a stop to the over-sulphuring of wines and things of that kind, and interfered also in other instances, and with regard to olive oils and matters of that sort. They found things out by experiment on detachments of men. I believe Dr. Wiley, who is at the head of the Board, has a number of volunteers who volunteer to be subjected to the tests which they think fit to prescribe there, and they have made very many discoveries through that.

16115. (*Dr. Cushny.*) What is the basis wine?—The basis wine is made from evaporated grapes and from currants. They are brought to this country, and they are mixed with water and certain ferments, and made into a passable imitation of red wine.

16116. Then you would refuse the spirit made from this wine the name of brandy?—Yes.

16117. (*Dr. G. S. Buchanan.*) Where would that be distilled?—They had a distillery in Fulham at one time.

16118. (*Chairman.*) You have spoken of a department, the object of which, as I understand you, is not to apply only to spirits of any kind, but generally to the food products of the country?—Yes.

16119. That is a general department?—Everything.

16120. But utilising your department, so far as the matter is before us, with regard to spirits, it would be an assistance to the Excise—a kind of Excise police investigation. That would be done by its officers?—Yes.

16121. That would require a very large staff, a very large expense, great supervision, and it would be inquisitorial, so that it would have to be administered with great delicacy?—Excise officers at the present moment are more or less inquisitorial.

16122. You are going to carry this matter into the publican's bar? It would have to have great care in being carried out?—I do not think it would have such an effect as that. I do not think it need be so. A man who means to act honestly by his customers would not object in the slightest degree, nor would it be made in the least bit unpleasant to him.

16123. The officers would have to enter into every public house, and see what was going on there?—Yes, certainly, as an inspector would now to-day.

16124. That would not be their only duty. It would be the duty of officers who need not be very much skilled. You spoke of carrying your Board further, so that it might be a help in judicial inquiries as to whether the law has been broken or not?—Yes.

16125. It is a very difficult task indeed for an unscientific magistrate to determine a question upon the evidence of persons as to whether a standard has been reached or not, or whether a definition has been reached?—There is no definition.

16126. What do you propose this Board should do? Are they to make definitions?—Yes.

16127. In advance of the cases as they arise, or in all cases?—In advance, so that everyone would know, as they have also done in the case of the United States Government. They have defined what is so-and-so—what is whiskey, what is brandy, what is olive oil, and so on.

16128. To everything they must apply a fixed standard?—Yes.

16129. In the administration of the law in many cases we have what we call experts who are not quite judges, but they are advisers of the judges, as in Admiralty cases, and cases of that description. We have experts who afford very great assistance to the tribunal. Would it be any use in any cases of this kind, like a prosecution for brandy, or whiskey even, that a magistrate should have the power to call to his aid from the Board one or two experts to sit with him and advise him in each case, as to whether the standard had been reached or not?—Yes, I think it would be a very good idea.

16130. I am not saying it would work out, but it is a matter of consideration whether it would aid in such cases as these, if the magistrate wants assistance, to call in experts, scientific men more or less from the Board?—Yes.

16131. I quite see where there is adulteration, and that ought to be guarded against. There are cases where such questions arise between Scotch whiskey and Irish whiskey, and here it would arise between Cognac brandy and blended brandy. With regard to the process you suggest of employing persons to inspect, what interest would they protect except one, and that is that the consumer should get the real equivalent for the money he pays? Is there any other protection that would take place? I am not speaking of adulteration or where there is anything injurious to health, or where the article is not what it is represented to be, and of the substance it is represented to be, but take the case I have given?—The officer would protect the interest of the consumer primarily, but also he would protect the producer of the honest article secondarily.

16132. I do not quite see that, because in the case I put of the pot still and the patent still you must first assume that the consumer knows the difference and wants the article, or else you would not protect the producer?—But he wants, when he is asking for brandy, something that he has been brought up to—a peculiar flavour which is given also to the adulterated article. It is an imitation of brandy.

16133. Imitation we will say—not adulteration?—Yes.

16134. It is a question of price. If it is not injurious to health, if he gets what he wants, that means that his taste is satisfied, and it is only a question of whether he ought to get it a penny or twopence a glass cheaper. I do not see any other question involved?—His asking for an article and what is given to him is a substitution for that article.

16135. Where is he injured, because it might be a better article? I do not say that it is?—I do not think that it is.

16136. But the mere fact that it is not what he asks for does not injure him?—It leaves the door open to fraudulent action.

16137. There you come to fraud, and if it is fraud, you need not trouble?—Quite so.

The witness withdrew.

(Adjourned for a short time.)

Mr. G. R. BARNETT-SMITH, called.

16138. (*Dr. G. S. Buchanan.*) You are connected with a firm in Cognac, are you not?—I am the English representative of Barnett and Elichagaray.

16139. You are a firm of merchants in Cognac?—We are shippers and distillers.

16140. In your trade you deal with various qualities of spirit, do you not?—We deal with nearly every kind of spirit which is sent out from Cognac.

16141. And also you have some trade in France?—Yes, and Germany.

16142. Spirits with which you deal include Cognac?—Yes, Cognac brandy.

16143. As defined the other day?—Yes.

16144. And also a mixture of spirits such as Cognac mixed with other wine spirits?—Quite so.

16145. Cognac mixed with grain or beet spirit?—Yes, that we also deal in for inland purposes in France particularly.

16146. Some of those spirits would consist mainly, I take it, of grain or beet spirit, and have a comparatively small amount of grape spirit?—Not a small amount; it would depend entirely on the price. In France there are a number of buyers who have only one account with the Régie—that is what they call a red permit account, and whether they buy a very fine high-class article or a cheap article, they want it always sent under the red permit so as to prevent any possibility of annoyance with the Régie or the Excise in France, and so as to avoid having two accounts with the Excise. If they were to receive anything with a white permit it would necessitate opening a new account, so that everything that was entered under that account went out with that account—that is under the 1903 and the 1872 acquit. To obviate any difficulty of that description they have it sent all under one.

16147. The spirits with which you deal are of various qualities, and they are sold and exported, as you consider, in conformity with the French law?—Absolutely in conformity with the French law, that is to say, if we use a red permit we are unable to use the word "Cognac," even in France, or for sending abroad.

16148. That is to say, you have in your establishment separate chais?—We have the three stores, the 1903 permit store, the 1872 permit store, and the red permit store. You can bring goods from the top rung of the ladder—from the 1903 permit to the 1872 permit, and everything becomes 1872. You can bring it down to the red, but it loses the stamp of origin, and everything comes under the red permit.

16149. In the chai—the cellar—at your establishment which is under the red permit—the acquit rouge, you have a variety of spirits, but the majority of them, of course, are those which contain either industrial alcohol, or beet spirit, or grain spirit?—We have all three separately, and blend them as we wish to blend them.

16150. But I mean if you introduce Cognac into your red permit for the sake of making a blend?—Then it loses its stamp of origin entirely and becomes red.

16151. And you have no certificate to say that it is entitled to the name of eau-de-vie de vin?—No, it loses its stamp of origin entirely; you can bring things down into the red, but you cannot take them back again in any shape or form, and by that permit the customer has no guarantee at all as to the percentage of pure wine or the percentage of spirit used.

16152. Are you satisfied with the control that is exercised by the French Excise over these different places which are under different coloured permits?—I am perfectly satisfied in my own mind that the supervision is absolutely sufficiently strict, and is quite a guarantee of the spirit being a pure wine distillation both for the 1872 permit, and, more especially, for the 1903 permit. There is no question whatever that it is very strictly adhered to, and is a perfect guarantee of the purity of the article.

16153. Could we have the advantage of your experience in asking a little more about these different raw materials? Cognac by itself we had described to us very fully yesterday, and the day before, and I do not think we need go into it any further. Will you take the other wine spirit that is used in these mixtures: that is mainly from the Midi?—It is, I should think, mainly from the Midi. There is, of course, a certain amount of wine distilled in the district north of the Charente; also in the Blayais district, between Cognac and Bordeaux, there is a tremendous amount of white wine distilled which is not entitled to the use of the word "Cognac." I should think, without knowing, that that is limited to about 50 or 60 per cent., and that the rest of the wine spirit used for reducing the price of the pure Cognac brandy comes from the south of France district, but that is only used for the very cheap qualities.

16154. Is that spirit a very highly rectified spirit, or has it definite characteristics that leave you in no doubt that it is wine spirit?—At the present moment it is even more distinctive of its origin than it used to be. Since a certain judgment was given ethers are required. Before that, of course, they used to highly rectify it, and simply make a neutral spirit of it, while now they do not rectify it, in order to retain a specified percentage of ethers in the spirit, consequently the "terroir" is more pronounced now than it used to be.

16155. What would you regard as the most suitable for mixing with Cognac in order to make a cheaper variety? Would it be a highly rectified spirit, as nearly a silent spirit as you could get?—In order to keep or maintain the flavour of the district of Cognac, it would be better to take a more silent spirit than one that had its own characteristic.

16156. In order to get what we may call a readily saleable cheap spirit?—Of course, it is a question of taste. The terroir of the South of France does not appeal to us at all; we prefer to eliminate that flavour as far as possible.

16157. It was told us this morning that the difference between Cognac and Midi spirit in price would be something like 3 as to 1. Do you think that is correct?—It would be correct if you take the finest growths of the Cognac district, but if you took the Bois, the outskirts of the Cognac district, the difference would not be so great. If you take it as far as the Champagne districts, that is, the best class growth, I have no doubt that the original cost price off the still would be quite that.

16158. Taking a Cognac that does not come from the finest quality, how would that compare with the Midi?—I should think there would not be more than perhaps 2 to 1; but, of course, it varies entirely every year—it depends on the vintage. One year we may buy the wines at half as much again as we did the year before. When there is a very big crop naturally the price of the wines goes down.

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16159. The same thing arises in the case of grain spirit and beet spirit, does it not?—Yes, but the prices do not vary to the same extent.

16160. How do they compare with the Midi spirit in price?—I should think the prices are almost identical, speaking from memory. Grain spirits have gone up a great deal in France the last five or six years. The wine spirit would be slightly dearer, but there is not a very great difference.*

16161. What do you say as to the price as compared with the price of beet spirit?—I do not think there is a great deal of difference.

16162. So far as there is a difference, it is on the side of the grain?—The grain spirit is dearer as compared to beet.

16163. In making that computation are you taking into account the cost of carriage to Cognac?—It is some years since I lived over there, but as far as I know, our prices always used to be delivery at Cognac.

16164. The grain spirit and the beet spirit have a great deal further to come, have they not?—I should think on the contrary—one comes from Lille, and the other from the south coast, Marseilles. I should think the journey is rather nearer from the north than the south.

16165. Would you think there is a broad distinction to be made, or can be made, in quality and in suitability for mixing between the wine alcohol on the one hand, and the grain and beet on the other?—My contention, of course, is that brandy must, of necessity, be purely and simply derived from wine, and therefore I do not admit that brandy can possibly be brandy if there is even 5 per cent. of grain in it; that is my personal opinion.

16166. I am very glad to have that opinion, but I was looking at it rather from the point of view, apart from the question of name, of the kind of spirit that you produce by adding, on the one hand, the Midi spirit, and, on the other hand, a grain spirit or a beet spirit?—If they were used in the same proportions, I should certainly prefer the wine spirit. It would take a little bit longer to mature, perhaps.

16167. You think it would make a better article?—I think if a sufficient age was given to it, it would give a much better article than the grain spirit for the purposes of consumption.

16168. In order to produce a readily saleable article would the grain spirit mature quicker?—It would mature perhaps quicker.

16169. It is more highly rectified?—Yes, it is more highly rectified—it is more neutral.

16170. I do not know if you are familiar with these grain spirits in France, but can you compare at all the grain spirit that is used in France and the grain spirit that we get over here in this country?—I have not compared them at all, and I have no basis of argument or idea on the subject.

16171. I mean just as regards their ordinary characters to you as a merchant or a distiller?—I have never tasted the two in comparison, but as far as I know, I do not see why there should be any difference if the spirit is from pure grain. Of course, in some grains on this side a proportion of malt is used.

16172. Is no malt used in the conversion of grain spirit over there?—No, as far as I know there is no malt used at all. That would certainly make a difference in the flavour of the article.

16173. (*Dr. Adeney.*) What method of conversion have they there? Is it by means of acid or the amylo process?—I should think it is the acid conversion, as far as I know.

16174. (*Dr. G. S. Buchanan.*) Then I gather that you personally have no objection to different definitions being required for Cognac and Cognac mixed with other wine spirit, both of which you would call brandy?—Quite so.

16175. And mixtures of industrial alcohols or grain spirits with these articles?—Not if it were possible to find a fresh name, but if it is to be called brandy I should certainly object to brandy being anything else but a pure wine spirit distillation.

16176. At the present time, I take it that in the absence of any definition of brandy these articles may be sent to this country as brandy?—There is nothing to prevent them.

16177. They are sent?—In fact they are, except, of course, when the customer insists upon the company's guarantee being shipped with them.

16178. That does not happen at present?—Many customers do insist upon it.

16179. Are those merchants on this side?—Yes.

16180. If the merchant over here desires a guarantee that these cheaper brandies that he buys are entirely of wine origin he can get it?—Yes, certainly.

16181. That is the result of the acquit system?—Yes.

16182. Can you tell us whether there is any difficulty as regards the use of the term "brandy" in the case of a spirit that contains grain spirit when it comes in as it is imported? Do the customers make any objection?—No, the customers make no objection at all, but they simply buy what they consider the best value at the price. It is invoiced to them as "brandy."

16183. The spirit that consists mainly of grain spirit, if it is called "brandy" is accepted as brandy?—Yes, if such were shipped, but there is very little of it shipped to this country, of course.

16184. Can you tell us what sort of competition the cheaper kind of brandy, such as you have been speaking of, from France meets with from other countries?—It meets more particularly in competition with brandies sold as vatted brandies on this side. There is a very big competition with the very cheap class of brandies coming from ports such as Havre and Marseilles, Egyptian brandy, and brandies of that kind.

16185. Are those brandies in all cases derived from grape juice, or are they not?—As I gather, I should say certainly not—most decidedly not; in fact, the prices at which they are sold at times makes it impossible for them to be anything else but of grain spirit.

16186. For example, Hamburg brandy. What is that?—As far as I know I should imagine it is the distillation of basis wines—wines manufactured from dried fruits, currants, or other things, also with an admixture of grain spirits. Of course, they are sold as pure grape spirits, but they base their name of pure grape brandy on the fact that they contain a percentage of ethers. When they are sold by public auction the ethers are added in the catalogue, so that the customer shall know he is protected from a certain point of view from the ether test; in fact, I took out some figures the other day from catalogues of some sales in the last six months, and the ethers were mentioned in almost every case. In one case the ethers are mentioned as 101; then "Ethers 104"; and "Ethers 110." In nearly every case the ethers were mentioned as an inducement to buy. The brandies were sold at as low prices as 1s. 11d. and 1s. 5d. per gallon delivered in bond in London.

16187. At what strength would that be?—Proof strength, and sometimes over proof. The prices were 1s. 10d., 1s. 9d., 2s. 2d., 2s. 1d., 1s. 8d., and 1s. 8d.

16188. In order to give us a comparison with those will you take a good Cognac?—Cognac, not French brandy?

16189. Yes?—We know new brandies are sold at about 6s. to 7s. For instance, I dare say Martell, 1906 vintage, speaking from memory, would be sold at 6s. 8d. or 6s. 9d. opening price.

16190. (*Dr. Adeney.*) That is at proof strength?—Yes.

16191. (*Dr. G. S. Buchanan.*) That is comparable to these figures that you have given us?—Yes.

16192. Can we take next the price of an average quality mixture of Cognac and other wine spirit?—It entirely depends upon the percentage used, but one could sell as low as 4s. or 4s. 6d. a gallon. One could sell absolutely pure South of France wine without anything else at about 3s., but in that case it would be almost entirely pure South of France wine.

* The witness has since written with regard to this statement as follows: "This evidence (from figures since obtained) is wrong. The difference in price of grain and Midi wine spirit is as 1s. 2d. to 1s. 9d. per proof gallon run off still."

16193. That would hardly be recognised here as brandy at all?—It would be pure wine spirit, and a lot of it is sold, of course. There is no getting away from the fact that there is a lot of it sold.

16194. Not sold by itself?—Yes, I think so.

16195. Does it get into consumption?—I should imagine so—pure.

16196. (*Chairman.*) Is that on that side without carriage or delivered here?—The difference is only 2d. a gallon. That is what it works out at. That is, the freight through from Charente to London, including putting it into bond, works out at about 2d. per gallon.

16197. (*Dr. G. S. Buchanan.*) I rather gather that what you wish to insist upon before the Commission is the advantage of the acquit system to satisfactory trading, and the keeping up of the quality of the article?—And the protection of the public who ask for brandy.

16198. In place of stipulating the others in these catalogues at these sales they should state what guarantees they have as to the origin of the spirit?—I do not know how far it is workable from the Customs point of view, but my idea is that from a non-wine producing country it should be impossible to import brandy. I say that the Customs should not admit entry of a spirit denominated brandy from a non-wine producing country. It stands to reason that if they have not got wine they cannot produce brandy.

16199. That is to say, you would not admit any Cognac brandy sent from Hamburg?—No, because I do not think anybody would attempt to do it, but if they received it in bond there they would have the original guarantees, would they not, or they would be able to obtain them, consequently they could forward those guarantees through, and there would be no difficulty in that.

16200. It is not on the point of the port of shipment that you are objecting, but on the point of origin?—Yes. Where pure wine is distilled—not the refuse of the press which we call in France the Eau-de-vie de Marc—but the absolute distillation of pure wines made from the distillation of the grape, and they must be distilled under Excise. There ought to be no difficulty whatever in approaching the Government with a view to getting them to give the Excise a certificate that the spirit has been distilled from pure wine, and under Excise supervision.

16201. Take France as the simplest case?—We have that guarantee absolutely existing. The acquit blanc is a guarantee that it has been distilled from fresh wine and not from manufactured wines, from dried fruits or raisins—that it has been actually distilled from the fermented juice of the grape. In other countries where such a distillation takes place—there is no country in the world where distillation takes place except under Excise supervision—there ought to be no difficulty in getting an Excise permit. If it is made from manufactured wines the Excise must be aware of that fact. I believe at the present moment that all Australian brandies coming into this country carry with them a certificate to the effect that they are distilled from wine, and there is no difficulty, I should think, in obtaining the same certificate from other countries as long as the Excise and Customs on this side satisfy themselves, as they are satisfying themselves in regard to French acquits, that that certificate is really efficient.

16202. Assuming them to be satisfied with the certificate as regards French brandy, Australian brandy and so forth, would you say that the goods may be admitted as brandy?—As brandy.

16203. Then you would get to your middleman or merchant or to your auction room?—But he would not have any sale if it were not admitted by the Customs.

16204. You would actually exclude it?—Exclude all other spirit.

16205. Except that for industrial use?—It could be entered as plain spirit.

16206. You would allow it to be entered as plain spirit?—Yes, but then I should not allow plain spirits to get into the hands of wine merchants for the purpose of blending.

16207. That is to say, you would have to go further if you get as far as that?—Yes, at once you would have to say that no plain spirit must go into a wine merchant's office for the purpose of consumption. If he bought plain spirits as such the Excise would then be allowed to ask him to what use he intended to put that plain spirit.

16208. What you are suggesting is clearly what could only be effective if it was a link in connection with considerable organisation for providing better descriptions?—I think there is only one description of brandy, that is a distillation of wine spirit, and as to those countries where wine spirit is distilled, surely there would be no difficulty in them giving their guarantee as it exists now at the present time in France.

16209. You think merely insisting upon that guarantee at the present moment from countries that we could be assured did supply us with a spirit that was properly entitled to the word brandy would help satisfactory trading?—I think it would prevent the sale of any spirit as brandy that was not the pure distillation of wine.

16210. (*Chairman.*) You would admit it as plain spirit?—I should admit it.

16211-2. What you are objecting to is it coming from a non-wine country as brandy, but you would let it come in as plain spirit?—Yes.

16213. When it has come in how would you prevent a man calling it brandy?—I should not allow a wine merchant to use plain spirit which was a spirit of no denomination for purposes of consumption.

16214. What is the machinery to prevent it?—The Excise know at the present moment what spirits go into a wine merchant's office, and if it was made an offence against the law to use plain spirits for consumption he would not be able to get it into his stores at all. Nobody would ship it to the country, because there would be no use for it.

16215. (*Dr. G. S. Buchanan.*) You think the practical effect would be that it would stay out?—Yes, if nobody could use it nobody would send it to the country, it would not be wanted, and there would be no use for it.

16216. (*Dr. Cushny.*) Could it not be mixed in bond?—It is under the Customs the whole of the time it is in bond.

16217. But why not mix it after it has come out of bond?—If it is made an offence for any wine merchant to use plain spirit for consumption, immediately he clears it the Excise follow it from that time, and they would be able to go to the wine merchant and ask him why he has plain spirits in his cellars.

16218. (*Chairman.*) Is plain spirit injurious to health?—I am not sufficiently well up in medicine to say that.

16219. Why should he not sell it?—He is going to sell it either as brandy which it is not, or as Irish or Scotch whisky which it is not, or rum which it is not. He is therefore going to use it for a spirit under a denomination to which it has no right.

16220. Could not he sell it as plain spirit?—I do not think he would ever get a buyer for it as such. If he chooses to sell it as plain spirit there is no reason why he should not do so, but I do not think he would ever find anybody who would buy it. At the present moment it is going into consumption under names to which it has no right.

16221. (*Dr. G. S. Buchanan.*) We have had a good deal of evidence the last day or two with regard to the question of official descriptions and classification of different kinds of spirits. You are a merchant dealing with a good many different classes?—Yes.

16222. But you say that if a definite understanding as to in what sense a particular word should be used, such as Cognac brandy and so forth, were established, it would help satisfactory trading?—I maintain to start with that brandy must be wine spirit, irrespective of the country of origin where wine is distilled. French brandy would have to be French brandy and Cognac brandy would have to be Cognac brandy, but I do not think the general public would take the trouble to come in and ask for a bottle of Cognac brandy or a glass of Cognac brandy; it simply reduces itself to a question of price. One man will pay 5s. for a bottle of brandy and another will pay 12s., and some people even go as far as 20s. and more for a bottle of brandy. It is simply a question of a wine merchant buying to the best of his ability a spirit called brandy, but unfortunately at the present moment people who come

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in and ask for brandy are sometimes not getting a pure wine spirit.

16223. I suppose it is a fact that a large proportion of people who do not buy spirits very much buy brandy occasionally in bottles and so forth. They get it from grocers and the smaller wine merchants, who are practically retailers and do not know anything of the quality?—The distributors?

16224. Yes. That is so, is it not?—Yes, there is a tremendous amount of it done, and there is no question whatever that the general public when they ask for a bottle of brandy associate brandy with France. I certainly think if Spanish brandies, Egyptian brandies and Californian or Australian brandies were sold on their own basis as such there would be very little demand for them.

16225. But surely Australian brandy is sold as such?—Yes, but I think there is a lot of it mixed and blended; in fact, I know there is.

16226. With regard to that point as to the grocer or small wine merchant who is practically a distributor, would it not help satisfactory trading if the bottles have some definite indication of the kind of spirit which they contain, for example that they should not bear the word "brandy" unless they were entirely derived from the grape?—But they could not be otherwise if my scheme were carried through. At the present moment I do not see how you are going to prevent a man putting on "brandy" because he buys it as such and you are allowed to-day to sell it as such. You cannot prevent him putting "brandy" on that label. You might be able to prove that it was not Cognac brandy, and you might possibly be able to prove that it was not French brandy, but you cannot prevent him calling it pale brandy.

16227. Besides the man who may be defrauded over the bar of the public-house, there is also to be considered the man who, perhaps, rather deserves consideration, namely, he who gets his occasional bottle of spirit through his grocer or small wine merchant who is practically only a distributor?—Yes, but I do not myself see what machinery could be put in force to prevent that being done. In a great many grocers' shop-windows, if you look at them, you will see a label with fictitious names of firms which do not exist at all, but they are always French names. They do not put a German name or a Spanish name on the bottle, but it is always a French name with perhaps the word above it "Eau-de-Vie." The word "Cognac" does not appear in many cases, but a French name and "Eau-de-Vie" on a very nicely got up label, and naturally the man when he buys that thinks he is getting French brandy.

16228. That is what in France they are trying to regulate gradually?—You cannot regulate it. They do not use the word "Cognac" in France even.

16229. Is there anything you wish to say about the ageing in bond of brandies?—I think it is not necessary or advisable to have brandies lying in bond for the simple reason that the greater proportion of the brandies sold over here at the present moment are brandies ready for immediate use in bulk, and are generally, considerably over the two or three years' limit which might be enforced. If people do buy young brandies—brandies of 1904 or 1906 vintage, or whatever the vintage is, they generally keep them five or ten years in bond before using them, and the majority of brandies sold are certainly of the requisite age and sufficiently matured for consumption.

16230. Can you give me any idea as to what sort of price per bottle those spirits that you spoke of as being bought for 2s. 4d. and so forth would fetch?—That is quite impossible. I have not the slightest idea. It all depends who bought them, and what class of trade he had, and whether he blended them with something else or sold them as they were. It would be quite impossible for me to say. They may have changed hands two or three times in bulk before they found their way into bottles at all. They might be used at bars or in public-houses without going into the bottle at all.

16231. (*Dr. Adeney.*) Would you think a 3s. per bottle brandy labelled "old brandy" was from the vine?—I should not like to drink it myself.

16232. I will give you an actual case. I know of a bottle of brandy so labelled with a label showing the leaves of the vine and grapes and called old brandy?—The word Cognac did not appear?

16233. No. That on analysis proved to be simply silent spirit coloured with caramel; 3s. was given for a bottle?—It was a very exorbitant price.

16233a. (*Chairman.*) When this objectionable liquor is sold and gets into the hands of the retailer, does he sell it as good brandy at the fictitious price, or does he sell it openly as inferior brandy at a lower price?—He sells it at a price, and labels it "pale brandy." It is sold at 3s., 3s. 6d., or 4s. a bottle. In some cases I have known them get a bigger price for it.

16234. Does he sell it as if he were selling really first-rate Cognac brandy, or does he tell the customer: "Here is a price so small that you must know it is a cheap quality of brandy"?—No, he does not say anything at all.

16235. Does not the price say anything?—The present age is all for cheapness, and as long as they get a spirit that they think is brandy they are satisfied.

16236. Does not the price itself tell the customer that he is not getting Cognac?—I do not think so at all.

16237. I thought you said that some buyers did want to get it cheap?—I am talking of the wholesale buyer.

16238. But I am not. I asked you as to the man who ultimately gets this cheap stuff, does he sell it at a price that would warn the public that it is cheap stuff, or does he sell it at the higher price, the Cognac price?—He sells it at a lower price than Cognac brandy would be sold at, but he does not tell the public in any shape or form what it is he is selling them.

16239. I did not suppose for a moment that he told them, that is begging the question, but does not the price tell them?—I do not think it does. I do not think the people who buy that class of brandy are sufficiently educated to know.

16240. What is the price of good Cognac brandy in bottle?—It depends on the age; it is from 4s. upwards.

16241. What ought to be the price of that stuff that you are speaking of?—I should think it ought to work out at 1s. 6d. or 2s. a bottle.

16242. But what does it in the hands of the seller work out at?—These men sell it at anything from 3s. up to 4s. or 5s. a bottle.

16243. Therefore it gets up to the Cognac price?—Yes, it does very nearly get to the Cognac price.

16244. And that, of course, is a fraud?—There is a great difference between the actual price paid and the selling price. It is not what it ought to be by any means. It is just under the Cognac price so as to induce sales.

16245. (*Dr. Adeney.*) Could you give us any idea of the relative prices of Australian brandies and French brandies of equivalent strength and age?—I have not got them, but as far as I know they are almost as high, if not higher, but I have no actual figures to go upon at all.

16246. (*Chairman.*) Do you know enough to say what the comparative quality of the Australian brandy is as compared to the French?—I think the quality is good, but it is not the same soil at all.

16247. It is grape?—Yes, I believe so, but the difference of soil is so great that it makes to me an unpalatable article. It is shown absolutely in the spirit itself.

16248. (*Dr. Adeney.*) I take it that in the evidence you have given us the wholesale dealer in these cheap brandies really gets in proportion a larger profit than the dealers in the better class of Cognac?—I think in many cases he does.

16249. (*Mr. J. Y. Buchanan.*) The sale of that very cheap stuff over the bar is much facilitated by the customers not having been accustomed to drink real Cognac. They are poor people, and therefore have not any warning about it?—There is that, but I think the man goes in and immediately asks for brandy. The public are not in a position to defend themselves—they are not sufficiently educated.

16250. The public probably do not even know because they have never tasted Cognac, but have always drunk what has been given them as brandy?—Yes. You have to protect those people.

The witness withdrew.

Mr. Victor Herbert Veley, called.

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16251. (*Dr. Adeney.*) You are a doctor of science, and master of arts of the University of Oxford, and a Fellow of the Royal Society?—Yes.

16252. You have had a considerable experience in the examination of spirits of various kinds, I believe?—Yes. My experience principally has been in cases arising under the Merchandise Marks Act. I have been retained by the Kensington Borough Council in a case arising under the Sale of Food and Drugs Act, but my main experience has been with reference to the Merchandise Marks Act.

16253. You are the author of a paper on methods for determining higher alcohols?—I am the author of one paper upon the higher alcohols, and several other communications of mine bear upon the methods which are adopted for the determination of other constituents of potable spirits.

16254. Will you give us the reference to them?—Yes, I will hand you the pamphlets. (*Same handed to the Commission.*)

16255. Now as to the use of the word "brandy." You have some instances of its use in the past?—Yes.

16256. Can you give us those?—The question of the distillation of a spirit from wine has been known for at least twelve centuries. There was a certain writer, Marcus Græcus, of the eighth century, and I could give an account of the manuscripts, but that is not material.

16257. Will you give us the reference?—Yes. He describes how he prepares a spirit by the distillation of either white or red wine in some form of alembic. The sentence to which I wish to draw attention is this: "Et nota quod illa quae primo egreditur est bona et ardens, postrema vero est utilis medicinæ." The translation of that is: "Observe that the first portion which comes over is hot and fiery, and the last portion is useful for medicine." Twenty centuries have past away, and we are saying the same thing still. Then there is another writer, Abulkasin. I need not allude to him. Then we come to Arnaud de Villeneuve, who lived in the fourteenth century, who obtained a burnt wine—"vinum ustum." He regarded it as a universal medicine, and the best medicine for prolonging life, hence he called it, "aqua vitæ," "eau-de vie" or "eau d'Immortalité." The first two phrases survive to the present day. In the fifteenth century the manufacture of aqua vitæ become general, especially in Italian monasteries, where it was flavoured with sugar and aromatic substances, and exported as "Liquor," or "Rosoglio." With the manufacture the consumption also increased, so that various governments adopted repressive measures against those who imbibed too largely of eau-de-vie. From this time forward the industry became general in vine growing countries, especially in Spain (Catalonia) and France (Herault), and to a less extent in the Charente, though at a later date the last named centre became the most important.

16258. I see that you give a definition of "brandy," but we have already had a similar definition, so perhaps you will allow me to pass on in your precis unless you have any special definition of your own that you would like to offer as to brandy?—There are one or two points that I should like to put before you. I propose to put forward the following definition: Brandy is a potable spirit prepared by the fractional distillation of wine only, and by "wine" I mean wine obtained from grape in a pot still, or a modification thereof, and properly aged and matured.

16259. Would you deny the use of a patent still?—I will deal with that a little later if you will allow me. Then I propose to deal with eau-de-vie de Cognac, or Cognac brandy, or, briefly, Cognac.

16260. We know there is an official definition of that now?—That is true, but there is one point to which I should like to draw the attention of the Commission, if I may be allowed. I cannot support the contention which has been raised that wine spirit is made in Cognac and nowhere else, nor, on the other hand, can I support the contention which has been set up by German legal authorities that the word "Cognac" has lost its specific or topical import. I will give the definition which the German legal authorities adopt. The point appears to me to be of service, as some of the so-called brandies are imported from Germany, I will read the decision of their legal authorities: "It is in vain that man would desire to eliminate this word 'Cognac' as a description for a German treasure word"; that is the translation of the German. My comment on that would be that the words "Brauneberger," or "Berncastler Doctor Auslese" are as much treasure words to Germany as "Cognac" to France. I now pass on to British brandy. This term has been known to the trade for seventy years. I am not prepared to defend the term, for in my opinion it is a misnomer, but the term exists. I take it to mean a neutral or silent spirit manufactured in a patent still, and subsequently flavoured artificially. I propose to deal with that and to show you some of the artificial flavourings which are used in the manufacture of British brandy. I do not consider it material whether this British brandy is made in this country, as the name would imply, or whether it is made in any other country, and herein especially in Germany. I would venture to express the opinion that all puncheons, casks or bottles kept in stock or exposed for sale, and containing British brandy should bear those words legibly printed on cards or labels affixed thereto. As an illustration I produce a bottle which was the subject of an action under the Merchandise Marks Act which bears a label which is a colourable imitation of that of a well-known and highly respected Cognac firm. That bears the words: "Very old vintage Cognac brandy, matured in wood." My examination of this sample shows that it was not old, and much less "very old," that it was not a Cognac brandy, much less a "vintage Cognac brandy," and that it had never been matured in wood. It was, in fact, a British brandy. I will hand to the Commission the sample. (*Same handed to the Commission*). A judgment was obtained in favour of the offended company in accordance with my finding that the sample was a British brandy, and nothing else.

16261. Was that on chemical analysis?—Yes, and taste. I did both myself. I will now pass on to the question of blends, which are called in Germany "Verschnitt Cognac," and in France "Coupage." Whenever this term, well-known to the trade, is used it will be taken to mean a mixture in any proportion of a genuine brandy, that is to say, a true grape wine spirit, with silent spirit, or a British brandy. I am, of course, aware that the word "blend" is equally applied to mixtures of two genuine grape or wine spirits. But that is not material to my argument. Then a few other definitions as regards bulk and bottle brandies. I shall take a bulk brandy to mean a brandy, whether genuine or British, sold by the vendor at the distillery in some form of cask, but which may be bottled subsequently by the purchaser. The latter, a brandy bottled by the vendor at the distillery and sold to the purchaser in cases of per dozen bottles, hence sometimes called case goods. Now a word or two with regard to the term which now figures very largely in advertisements, namely, the term "grape spirit." My objection to this term "grape spirit" is that it does not exclude what is called "eau-de-vie de Marc," or a spirit which is obtained from grape skins which are allowed to ferment in some form of puncheon, and then subsequently steamed in a still. "Eau-de-vie de Marc" is clearly a spirit obtained from the grape, although as from grape skins, I should not call that a brandy.

16262. Why do you say that? Do you say that on chemical composition or flavour?—On both.

16263. Furthermore, do those Marc brandies not mature well?—I should not like to express my opinion about that at all.

16264. It is simply on the ground that it does not come from the juice of the grape?—Yes. Now with regard to the distillation process my view is this. I see no objection to the patent still. There are several systems used in France which are of the patent still type, namely, the Savalle, a modification of the Coffey still; the Egrot system; the Langier system; the Derosne-Cellier system; the Blumenthal system; all used in France. I have brought with me a book in which the various forms of still are described, and if that will be of any service to the Commission I will hand it in (*Same handed to the Commission*). There are other books here also which give the same descriptions.

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16265. I take it that you agree with the evidence that we have had during the last two or three days, that none of these complicated forms of still are used in the Charente district?—That is so.

16266. In what parts of France are they used?—I think they are used in the parts of France where they make an inferior kind of brandy—the Department of Auvergne, the Department of the Haute Loire or Velay, where they do not make very good brandy.

16267. Are they used chiefly to get rid of this flavour which is complained of?—Yes, I think so.

16268. And not simply to make up the sick wines?—Precisely. Then there is a form in Hungary called the Neukomm and Stollar form. Then I deal with the substances present in genuine spirit, but perhaps you have heard that.

16269. We have had considerable evidence on that?—Now I wish to pass on to the British or imitation brandies. As I stated before, these have been known for at least seventy years. The first description which I can find with regard to the preparation of them is given in "Ure's Dictionary of Arts, 1839." It is a passage written nearly seventy years ago, in which there is a description of preparing artificial brandy by distilling ordinary spirit of wine over prunes, mixing it with acetic ether and flavouring stuff, and then flavouring it with caramel and with a tincture of catecher or oak-bark. Although this passage was written seventy years ago, yet in the course of my experience I have come across a sample which I honestly believe was prepared by that method, or one somewhat similar to it. If I may be allowed, I should like to give a somewhat full description of the materials which are used for flavouring neutral or silent spirit so as to make up what are called, and sold as, imitation Cognacs or British brandies. They are all given in one of these books which, if of any interest to the Commission, I will hand in.

16270. Will you give us the reference to them?—Yes. The first recipe which I have—I am merely giving a rough outline—they put in rectified spirit, rectified grape-skin spirit, caramel, almond kernels, nut-galls, acetic ester, and nitrous ester. I understand that the introduction of nitrous ester in Germany is now prohibited. Then in another case they put in œnanthic ester, or Cognac oil, of which I have a sample here, acetic ester, tannin, glycerine, tincture of vanilla, tincture of bitter almonds. Then in another case they put in acetic ester, rum, and crude sugar syrup. In another one they put in œnanthic ester, rum essence, vanilla essence, tea essence, acetic ether or ester, ether of raisins. The above four merely form a selection. I have got twenty of them.

16271. (*Dr. G. S. Buchanan.*) Would you say how these have been obtained? Have they been published?—Yes, I have them in the books which I have here.

16272. Are they of British source, or German?—Entirely German.

16273. Is there anything to connect them with spirit coming into this country?—Probably.

16274. (*Dr. Adeney.*) Is this theoretical or practical? Have you any knowledge of actual brandies so-called being made up in this way, and supplied to the market?—I am going to deal with that. I will produce a sample of Cognac essence manufactured in Germany. The analysis of this essence has been made by Polenske, and given by König in the "Chemie der Menschlichen Nährungs-und Genussmittel." I will give the result of Polenske's analysis. I will not give the numbers, but just the outline. It contains citron oil, Cognac oil, acetic ester, Balsam of Peru, Vanillin, mineral residue, butyric, and formic esters. The Balsam of Peru contains ordinary resin and cinnanic acid, benzoic acid, and benzylic alcohol. That is the sample that is now before your notice. I would like to mention one more which I have not been able to procure for obvious reasons, namely, an analysis of what is called a highly concentrated Cognac essence "fine champagne." This essence, which is made in Germany, contains formic acid, acetic acid, butyric acid and higher fatty acids. It contains ethyl esters of formic acid, acetic and butyric acids, and it contains vanillin, fusel, sugar, and brown resin. Many other substances which have been found in the course of the examination of these materials are these: Pepper, capsicum, grains of paradise, the essential oils of orange, peppermint, violet-root, clover, juniper, and cassia.

16275. (*Chairman.*) What are grains of paradise?—The seeds of a plant the names of which I have forgotten for the moment. They have a very hot flavour. In my experience I have come across capsicum, and a sample which was merely composed of ordinary spirit of wine with some acetic ester put in, and coloured with a coal-tar colour, which I believe to have been Bismarck brown. I have here a solution of Bismarck brown to show how you could imitate the colour of brandy by such a solution (*The same was handed to the Commission*). There is one passage in one of these books to which I should like to draw your attention, namely, that it is the custom to add to these artificial spirits about 15 per cent. of a good Cognac brandy. If you will allow me I will translate a sentence from this book which I hold in my hand, namely, Hartlebens' "Chemischetechnische Bibliothek, Bund 246, Der Praktische Destillateur." It tells us exactly how all these things are done and how the artificial brandy is made and how to do it. This is what it says: "It is in all cases advisable to mix the Cognac imitations with not too large a quantity of pure Cognac—10 to 15 per cent. The bouquet becomes more decisive in fineness, and what is of especial importance, the mixture corresponds in its properties and its constitution to that of a pure Cognac in that it contains all the substances which are present in the pure Cognac. The quantities of these substances are small, but the sale price of the goods is much less, but the consumer obtains (for his money) at least some pure Cognac."

16276. Is there anything you wish to say specially in reference to the consideration of standards? We have had a good deal of information on that subject, and I do not know that it is necessary to go further into the subject unless you have something specially to tell us?—I have brought you other samples, if you will allow me to hand them to you. *Here* is a sample which I made up in the laboratory which might be sent to an analyst, who might reasonably report that it contains 80 per cent. of grape spirit. It contains 15 per cent. which I put in, and the rest is made up of chemicals. I have tested worse samples of brandy than this in West-End restaurants. Here is another which I consider to be of a very injurious type.

16277. (*Dr. G. S. Buchanan.*) Is this sample which you produce a thing sold as Cognac or one of the things from which you manufacture artificial Cognac?—That is the point. That substance can be entered and declared in the Customs House as "Cognac." It can be introduced into this country and declared at the Customs as "Cognac."

16278. What is it?—It is entirely an artificial essence.

16279. It comes from Cognac?—It is made in Cognac.

16280. I think there would probably be trouble in Cognac if that gets about, for they will ask you to verify it?—I am quite prepared to verify it. There is the verification in print. (*Handing periodical to the Commission*).

16281. The reference is "Ridley's Circular," December 12th, 1903, page 806. We can hardly go into that now. That is the statement on which you rely in connection with this?—Yes. Then I have here another one which I will hand to the Commission (*Same handed to the Commission*).

16282. (*Dr. Cushny.*) What does this dangerous mixture contain?—I should not call it dangerous, but I think it is injurious. I have not made an analysis of it so that I am prepared only to say that my experience of both these samples is this. I know perfectly well when I sample a brandy that has been manufactured from these materials for the simple reason that it gives me a stomach-ache for three hours.

16283. (*Dr. G. S. Buchanan.*) I think I should put you right on one point, and that is that the Customs accept no article as "Cognac"; they enter nothing as "Cognac." If Cognac brandy comes here it is entered as "brandy," but not as "Cognac." Your statement was that this could be entered and passed by the Customs as "Cognac"?—It could be passed as "Cognac."

16284. But so far as the Customs and their books are concerned it does not come as "Cognac" at all. It could not be put down as "Cognac." It is not known in their vocabulary?—I am merely quoting from what these people say, that it can be.

16285. It may have come in labelled as "Cognac," but the Customs would not recognise it as "Cognac"?—That may be so. *This* sample is simply an extract of oak-bark that is used to import the oak flavour to brandies. It is a material which is called Rancio. (*Same handed to the Commission*).

16286. The two specimens that you produce in relation to this statement in "Ridley's Circular" of December, 1903, are, in one case, essence of oak-bark, and, in the other case, an essence used to make up artificial Cognac?—Yes. Two come from Cognac, and the third comes from Germany.

Mr. V. H. Veley. 10 March 1909.

Adjourned to Monday, March 22nd, at 12 o'clock.

THIRTY-SECOND DAY,

Monday, 22nd March, 1909.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

MR. VICTOR HERBERT VELEY, D.Sc., M.A., F.R.S., recalled.

Mr. V. H. Veley. 22 March 1909.

16287. (*Dr. Adeney.*) I think at the time of the adjournment at our last meeting you had arrived at the subject of standards in your *précis*?—That is so.

16288. We have already had the ester standard formulated. Do you approve of that standard?—No, I do not. The ester standard, or what is called the ester standard, appears to have been the interpretation placed by learned magistrates on the words which occur in the Sale of Food and Drugs Act, "Of the nature, substance and quality" of any particular article demanded by the purchaser. The principal cases upon this point of the ester standard are the Lanarkshire County Council *v.* Wilson and McPhee, before Sheriff Thomson, on July 27th, 1903. The analyst in that case was the late Dr. Clark. I hand in a transcript of the evidence given in that case. The esters found were 28 parts according to the usual estimation. The next case is the Islington Borough Council (in the person of one Ward) *v.* Hillyer, before Mr. Fordham, stipendiary magistrate. The analyst in that case was Dr. Teed, and the esters found were 40·9. The third case was the Kensington Borough Council *v.* Prior, tried at Kensington Petty Sessions, on May 16th, 1905. The defendant appealed, and the appeal was heard at Clerkenwell Quarter Sessions, in November, 1905, before Mr. Loveland-Loveland, K.C., and a full bench of magistrates. I was retained in that appeal case to advise the Borough of Kensington upon the particular points which arose in that case, and upon the brandy question in general. I hand in a copy of the certificate of the analyst upon which the prosecution was started.

16289. (*Chairman.*) What is the extent of impurity?—He found that at least 68 per cent. of the spirit present was not derived from grape juice.

16290. What was the result of the appeal?—The result of the appeal was that the conviction was upheld with costs in that court and the court below.

16291. Beyond the 68 what were the other 32 per cent. of ingredients?—I am merely reading from the analyst's certificate.

16292. You do not know?—I do not. I hand in the certificate and the report to the Council. The contention, my Lord, that I raised in that case was that it was a British brandy to which 15 per cent. or thereabouts of a Cognac brandy had been added, and the defence did not in any way dispute my contention.

16293. (*Dr. Adeney.*) I gather from you that even if the spirit did contain esters, which would bring it within the so-called ether standard, it would not prove that it was genuine brandy?—I do not quite follow.

16294. Even if the spirit on analysis was found to contain esters to an amount which would bring it within the so-called ether standard that would not prove that that spirit was genuine brandy?—Precisely. They could be put in.

16295. That is the point I gather that you wish to raise?—That is the point I wish to raise here at a later period when I am dealing with another standard.

16296. Of course, we have analyses of undoubtedly genuine brandies in which the quantity of ethers is insufficient to bring it within the standard?—That is true. At the same time a great deal of capital has been made of an analysis of Cognac brandy cited in this text-book of Girard and Cuniasse, namely, of an 1834 vintage Cognac brandy in which the esters found were 60. My comment upon that is that an 1834 vintage Cognac brandy could only be found in the cellars of the very wealthy which are not likely to be invaded by a police-inspector in plain clothes, even once a year, for the administration of the Sale of Food and Drugs Act. I think it is obvious that the low proportion of esters had been due to the keeping and maturing of the brandy for a great number of years.

16297. You have made a large number of analyses yourself, and you wish to make some remarks upon those. Will you give us the benefit of your remarks?—Neglecting for the moment British brandies, I have examined 22 samples of grape or wine spirits guaranteed, or at least honestly believed, to be grape or wine spirits.

16298. You did not collect them yourself—they were declared to you to be genuine?—They were declared to me to be genuine. I have examined also five what I call blends, that is to say, those samples which had been admitted to me as being made up of a wine spirit to which a certain proportion of highly-rectified ethyl alcohol has been added.

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16299. You hesitate to say whether there was a wine spirit or a grain spirit?—I call it a blend.

16300. But the highly-rectified spirit—you do not know what the origin of that spirit was?—No, I do not know at all. Then, of the 22 wine spirits, the ester value in all of them was above 90. In the case of the admitted blends one was above 90 and four were below.

16301. So in those samples the ether standard would have operated in the right direction?—In the right direction. My view upon the ester standard is that it is too low. I have looked into 89 analyses with regard to this point, that is to say, those contained in this book of Girard and Cuniasse and those of the "Lancet" Commissioner and those which I have already dealt with. The average ester value of these 89 samples is approximately 123.

16302. What is the minimum?—I could not tell you the minimum. I have taken out the average of the samples which give a value above 90, and those which give a value below 90, having regard to my view that the 80 standard is too low and should be 90 at least.

16303. Do I understand you to recommend a one-constituent standard as an advisable thing?—No, I think it is most inadvisable, and that I will deal with later on.

16304. Have you formed any opinion as to what the standard for the total constituents in brandy should be?—You mean the maximum standard.

16305. The total secondary products?—I have not quite dealt with it in the way you have mentioned, but I have taken out an estimate of what I consider to be a reasonable standard for the volatile acids, the aldehydes, the esters, furfural, and the higher alcohols—the last as reckoned by the French method in terms of isobutyl alcohol, or the German method in terms of amyl alcohol. Would you like to have my figures?

16306. We should?—I have taken it so far as I can, not wholly approving of the method of analysis of other persons, but I have taken the volatile acids reckoned as acetic value 20—all being in terms of alcohol at 100 per cent. Aldehydes 10, esters 90 to 95, furfural 1, higher alcohol as isobutyl alcohol 100, higher alcohols, as amyl alcohol, according to the German method, 170; and I think that in any legal case which might arise under the Sale of Food and Drugs Act at least three of these determinations should be made, and that there might be a deficiency or elasticity of 10 per cent. allowed in one of them, provided that there is a corresponding excess in the others, and in case of any doubt the analytical results to be supplemented by the evidence of a professional taster. I desire to call attention to my view, that the practice in the law courts of France and Germany is to be preferred to the practice of the law courts in this country, namely, that the evidence of the professional taster is regarded as of equal value to that of the professional analyst. I may observe that in this country the professional taster has not formed a very high opinion of the professional analyst, and the professional analyst has not formed a very high opinion of the professional taster.

16307. (*Chairman.*) Who is the professional taster? He is an unknown gentleman in this country, is he not?—Not at all.

16308. But what office has the professional taster? I never heard of him until now. The analyst we know quite well, but who is the taster?—A number of persons engaged in the trade who make it their profession.

16309. They are experts who may come and say one thing or another, but they are not known as professional tasters in this country surely?—But their evidence has been taken in the Law Courts.

16310. But if you speak of a professional analyst we know he is a semi-official, but there is no such semi-official as the professional taster. He is at large, is he not, and you can call anybody to say what is their opinion?—That is true, but I should like to see the Government form such an office.

16311. That is another matter?—There has been a case with regard to tea in which the professional tasters were called in as such.

16312. Of course experts are called in?—I should like to see them attached to the Court.

16313. (*Dr. Adeney.*) I see your opinion differs from the French Technical Committee's opinion on this subject as to the possibility of suggesting a standard based on non-alcohol. I suppose you have read that report?—Oh yes—as regards any of these constituents you mean?

16314. Yes. You do not agree with the conclusions arrived at by that Committee?—I do not agree. I have taken out altogether 145 analyses of fairly definite specification, namely, those in Girard and Cuniasse and those in the "Lancet," and those of my own of wine spirits, of blends, admitted or supposed, and artificially flavoured spirits which are called in France Cognac de fantaisie. I find that out of 88 wine spirits 86 of them will satisfy my standard. Of the 24 blends admitted or supposed four would satisfy my standard, but none of the Cognac imitations or British brandies would satisfy my standard. I have also taken out two further series of samples perhaps of less definite specification, and in the first of this second series of 33 wine spirits 24 of them would pass my standard and none of the artificially prepared spirits. In the last series of 21 wine spirits, 18 would pass my standard and three would not. These five series include wine spirits of French, Portuguese, Spanish, Hungarian, Bohemian, Greek, and Cyprus manufacture.

16315. I see there is an important statement in your *précis*, and I should like to ask you a question as to the information upon which you make it, viz., that toxic and non-toxic substances in the spirits can be differentiated?—That leads me back to the Belgium standard, on which I should like to say a few words.

16316. Will you give us the standard to start with?—"It is forbidden to make, to sell, to expose for sale, to keep in stock, to transport for the purpose of sale spirits which contain per litre a proportion of higher alcohols valued as amyl alcohol, of aldehydes valued as ethyl aldehyde, and of essential oils"—in the case of brandy meaning esters—"which exceed a quantity of three grammes total." The next two sentences refer to Noyau and Absinthe, which do not concern us. "Our Minister of Agriculture can determine the methods to be employed for the determination of the substances mentioned in the present article."

16317. As a matter of fact do you know what method was used for the determination of the higher alcohols?—No, I do not, but I wish to say that I approve of the second section, namely, that a Minster of the Crown puts himself in a position to define the methods of analysis, and I should like to see that adopted in this country.

16318. We will come to that a little later on. Would you give us a reference to the passage that you have read so that it will appear upon our minutes?—It is in the Atti dei VI. Congresso Internazzionale di Chimica Applicata, Vol. V., page 688.

16319. (*Dr. G. S. Buchanan.*) What you are approving of in the case of the Belgium standard is a maximum standard for the secondary products—not a minimum standard?—That is true. Why I consider the Belgium standard works upon right lines is that it has separated out the toxic substances from the substances which are not toxic.

16320. Merely the matter of total quantity—three grammes of everything lumped together?—No, not of everything—of higher alcohols, aldehydes and esters.

16321. If those are under three grammes they are not toxic, and if over three grammes they are toxic?—No, you have mistaken me. According to the Belgium standard the spirit must not contain more than three grammes of these things. It takes out substances which are toxic, and says that they shall not exceed more than three grammes, and it pays no attention to the substances which are non-toxic.

16322. (*Dr. Adeney.*) Perhaps you would give us what you put under the head of "Toxic," and what you put under the head of "Non-toxic"?—I put under the head of "Toxic" what the Belgium Government appears to put.

16323. What are those?—The higher alcohols, the aldehydes and the esters.

16324. And the non-toxic?—The non-toxic consist of the volatile, and the fixed acids; the furfural will, of course, come under the aldehydes.

16325. (*Dr. G. S. Buchanan.*) Where does the ethyl alcohol come in?—This Belgium standard appears to be based upon the excess of toxic value over and above that of the ethyl alcohol contained in the spirits, and I have made a calculation to the effect that this Belgium standard would permit a toxic value in a spirit of about 10 per cent. over and above that of the ethyl alcohol present in that spirit. That is to say, that if the toxic value of any particular spirit was considered to be 100, that same spirit containing this proportion of these several constitutents would be 110. The difference is the 10 per cent. excess.

16326. (*Dr. Adeney.*) Are those conclusions based upon any well-authenticated scientific observations?—Yes. I have calculated in the case of a good typical sample of Cognac brandy, and I find that the increased toxic value will amount to 5 per cent. over and above that of the ethers and alcohols present. The determinations of the toxic value which I will briefly put in are the experiments of Professor Vandevelde, of the University of Ghent, who, as I believe, advised the Belgium Government on the subject, and a paper by Mr. Kemp working with Dr. Waller, of the Physiological Laboratory of the University of London on the toxic value of certain higher alcohols, and I also put in the results of some experiments which I have done in the last week in which I have compared the toxic value of a sample of pure ethyl alcohol with that of a Cognac brandy which I have had occasion to examine more often than any other, both being of the same alcoholic strength. The first appears at page 518 and the following pages of the Atti Dei VI. Congresso Internazzionale di Chimica Applicata, Vol. V. According to my calculation there should be a difference of about 5 per cent. or thereabouts, but the experiments show that this difference is almost a negligible quantity. I have here some photographs and tracings of the effect on the sartorius muscle of the frog.

16327. I think we might leave the discussion on this point till later on. I should like to proceed to your views of analytical methods. In dealing with coloured spirits, of course it is necessary to separate your distillation of volatile from fixed?—That is so.

16328. Have you anything to say with regard to what I would call uniformity in the method of that initial process?—There appears to me a great want of uniformity. Some analysts distil the spirit over the naked flame. Others, like myself, distil the spirit in a flask contained in an oil bath with a thermometer in the oil bath, and another thermometer in the vapour of the boiling liquid. A third set of people use what is called steam distillation, and there is clearly a fourth method of distilling the spirit, under reduced pressure. So there are four possible methods of carrying on this initial operation.

16329. Do you agree with me that these details are important ones so far as accuracy of analysis is concerned?—Very important. I take it that in any case in the process of distillation a certain amount of what is known to chemists by the name of hydrolysis takes place whereby the esters are decomposed into acids and alcohols. The effect is therefore that in the distillate the value of the esters is in all probability too low, while that of the higher alcohols and the acids is in all probability too high. To my mind there is room for a research or investigation upon this point.

16330. Would you agree with me that this is a question which would very properly be referred to an authoritative Reference Board?—I think so.

16331. It is a matter of such importance that it ought to be definitely settled by a competent authority?—Exactly. If I may be allowed to say so, I tried to persuade my friend, the head of the Government laboratory, to take this up, but he does not appear to have any interest in the question of spirits at all.

16332. As to acidity, what is it you wish to say about that subject?—I do not approve of the methods which have been adopted by some analysts, especially those referred to in Girard and Cuniasse, of reckoning out the acidity as a whole. To my mind it is important to separate out the total acidity into two factors, namely, the volatile acids which may conveniently be calculated out in terms of acetic acid, and the non-volatile or fixed acid, which consists mainly of tannin or tannic acid which could be conveniently reckoned out in terms of tartaric acids or something of that kind. For myself I lay considerable stress upon the tannins, or fixed acidity, and I have always been accustomed to make a rough or comparative estimate of the proportion of tannic acid, and the kind of tannic acid present in any particular sample of brandy which may have been sent to me for examination. Shall I describe that method?

16333. If you could give us a description of it we should like it, but I do not know that it is necessary at present to go into details. Could you hand in a description of the method?—I can give it to you in a few words. I added from one-tenth to one-twentieth of a 5 per cent. iron-alum solution to the sample under investigation, and obtain differences in tint of the same colour or a different colour according as to whether the sample contains the tannin of oakwood or extract of nut galls which is purposely added or catechu or catechin which is also purposely added. My experience in the law courts has been that the learned magistrates have been much more impressed by differences of colours they could see than by a series of numbers that they may not be able to understand. My method, of course, is not intended to be a complete accurate quantitative method.

16334. It is a qualitative test?—A qualitative comparative test.

16335. Have you anything special to say on esters or aldehydes or furfural?—I have nothing to say with regard to esters, except just the ordinary precautions, but with regard to what I may call the colour reactions for aldehydes and furfural I have carried on a very large amount of work upon such measurements of colour reactions, and on the last occasion I handed in a paper relating to the same. I have also devised an instrument or perfected form of instrument for the purpose of these determinations.

16336. With reference to the higher alcohols some of your work was referred to by a witness when giving evidence upon the subject of whiskey, namely, the impurities in the control alcohols that were used?—You allude to the French method?

16337. Yes?—But one of the main points in that communication relates to the method which has been adopted in France, and was for some time adopted in this country to determine the higher alcohols, using isobutyl alcohol as the standard of the same when heated with strong sulphuric acid whereby a yellow or a yellowish green colour is produced, and the tint compared with the standard solution. In the paper which is before you I proved, or endeavoured to prove, that if an isobutyl alcohol taken as the standard be pure or relatively pure, and the strong concentrated sulphuric acid was pure, or relatively pure, and the glass vessel be carefully cleansed then no colouration whatever is produced. The tint used as the measurement entirely depends upon a substance which is not the isobutyl alcohol used for the purpose of determination.

16338. They are impurities in the isobuytl alcohol?—They are impurities in the isobutyl alcohol, whatever they may be, and the conclusions with regard to this French method at which I arrived in the course of my work have been accepted by a considerable number of workers with the effect that few, if any, now use this isobutyl sulphuric acid method.

16339. Did your experiments extend to amylic alcohol as a standard?—Yes.

16340. You found similar results?—I did not determine whether pure amylic alcohol would or would not give discolouration. My experiments with amyl alcohol were with a view of showing that if a colouration was produced the relative values of isobutyl alcohol and amyl alcohol as set forth by the French would be substantially correct.

16341. Do you know the late Dr. Bell's evidence which he gave before the House of Commons Committee in 1891?—Do you mean with regard to the chloroform method?

16342. No—with regard to the sulphuric acid method?—No.

16343. And the effect of furfural upon the higher alcohols in giving the colour test?—I do not remember that particular evidence, but I have always felt that there is some risk of a small proportion of furfural coming over. As a matter of fact I always use in any case of importance this French method, not for the purpose of determining the higher alcohols, but if on adopting this method I obtain a red colouration and not a yellow or yellow green then I take it that there is considerable evidence that substances such as vanil-

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lin or coumarin have been purposely put into the brandy, and in that respect I regard the test as of some value, though not for the purpose for which it was originally designed.

16344. I think Dr. Bell's evidence on the effect of the presence of furfural in the sulphuric acid test would interest you. Have you anything to say as regards the German official method?—I have worked upon the chloroform extraction method, and I give the results of my work in this paper. (*Handing in paper.*) This method has given satisfactory results in my hands with the various higher alcohols which occur in what is known as fusel oil. But the method to my mind possesses disadvantages, first of principle, and secondly, of practice—of principle, because one is measuring a very small difference of two lengths; of practice, because it is by no means an easy task to obtain 30 per cent. per volume alcohol, which is the specification of density, correct to within two units in the fifth place of decimals. The actual density is S. G. 15/15=0·965575, and you must only have an error in the fifth place of two. My experience is that that operation takes me sometimes the best part of a day.

16345. A very slight difference of temperature would completely upset you?—And does. For that I always use a thermometer graduated to a tenth of a degree. It is perhaps hardly reasonable to expect that an ordinary analyst either would have the time or would take the trouble if he only got a guinea for his analysis. With regard to other colour tests, I think there is room for improvement in detail. I should advocate the use of a much longer length and much more dilute solutions as they would tend to diminish error, and at the same time I think that any person practising as a professional analyst should previously be tested by colour solutions, or by the methods known to physiologists as Holmgren's skeins of wool in order that his power of appreciating small differences of tint might be tested. I might cite a worthy colleague of mine in certain scientific investigations, and a person of some note as an accurate worker, who, though not colour blind, is from some defect quite unable to discriminate between differences of tint within a limit of about 20 per cent. This otherwise estimable person would clearly be useless for determinations of aldehydes and furfural.

16346. I should like to ask you one more question, and that is, have you had any experience with the Allen-Marquardt process for the higher alcohols?—I have never tried it.

16347. (*Dr. G. S. Buchanan.*) When you were here the other day you drew our attention to the use of essences in the manufacture of brandies and you put in a series of catalogues, recent monthly lists from some German firms, three of them printed in English. Can you give us any further information with regard to these? I see that each of these catalogues is a catalogue of essential oils, and one of these catalogues has an oil of Cognac, a white oil of Cognac, and a green oil of Cognac, and an artificial Cognac. That is in one catalogue, and in another catalogue it is the same except there are some varieties, including a rectified white and the finest quality green and so forth. It does not appear certain, from the description of these as essential oils and as green and so forth, that they are probably intended for the manufacture of artificial brandy. I think there must be some other use for them?—Of course, I do not know the catalogues you have got.

16348. They are the ones you put in, are they not?—No, I did not put them in.

16349. You referred in your evidence last time to the use of essences, and I had these catalogues before me. I thought they had been put in by you?—No.

16350. You may be able, however, to give me an answer with regard to that. Have you any actual knowledge of the use of these essences in brandy? I think you produced some of them last time?—Yes. Of course, I also produced the various recipes which these persons propose.

16351. You produced some description from German books as to how to make artificial Cognac?—That is so.

16352. I want to know whether you have any actual evidence of these recipes being followed out?—I have not in the course of my experience come across any sample in which I could find any distinct evidence that such œnanthic ester had been added to an excess or to a considerable amount, but as you have called attention to it I have found, in looking over some 400 or 500 analyses of brandy, that there is one sample of an artificial Cognac examined in Germany which contained a proportion of esters of a value of 612, or, to put it in round figures, six times the amount which should be normally present in a sample of brandy.

16353. You contend from that that some artificial essences had been added in that particular case?—In that particular case.

16354. The evidence that you would have therefore with regard to these essences is mainly the result of your analytical methods and examination?—Yes.

16355. And you had not any history as to the actual origin of these brandies. Do you know, as a matter of fact, the method of preparation which was practised?—I do not follow the question.

16356. Do you know in any of the brandies that you have had experience of that these essences have been used in the preparation?—Of course, some essences must have been used in the samples of British brandy, because otherwise they would only be spirit and nothing else.

16357. They must be essences in the case of British brandy?—Yes, they must be essences of sorts.

16358. (*Dr. Adeney.*) Would it be impossible to employ a highly-rectified wine spirit from the Midi district or Marc brandy?—Marc brandy, to my mind, comes under a totally different category.

16359. But it would be possible, would it not, to use those for the production of a British spirit in order to give flavour?—That might be so, and I have come across in my experience some samples which purported to be Cognac brandy—wine spirits—but which, in my opinion, were some inferior kind of spirit to which a Marc brandy had been purposely added to raise the proportion of esters. The proportion of esters in the Eau-de-vie de Marc is very much greater than those in a genuine grape spirit prepared in Cognac or elsewhere.

16360. (*Dr. G. S. Buchanan.*) You told us last time that in your experience you had come across capsicum in samples of brandy?—Yes.

16361. Can you say on what evidence that rests?—On tasting the residue.

16362. Is there any likelihood of fallacy in that observation?—The fallacy of tasting, which, of course, one cannot measure by a foot rule.

16363. Do you think that the fact of a very hot flavour being found in the residue points strongly to the idea of capsicum?—Not any hot flavour, because grains of paradise would give a hot flavour.

16364. You have mentioned the French methods of analysis and your experience of the colour test for higher alcohols. The official methods for examination of brandies in France for the purpose of their adulteration law are still under consideration, are they not?—I think so. That is, of course, the methods that are or were in use in the Paris municipal laboratory. I do not entirely approve of them.

16365. But there have been instructions from the headquarters laboratories in France for the examination of alcohols and brandies which were issued, I think, in 1906 and again in 1907, which took account of other things besides the colour test as regards the judgment of a brandy, and, in addition to that, I understand these methods, which are officially recommended, are being supplemented or will be supplemented from time to time as further work goes on?—Precisely.

16366. I only wish to point that out because you were speaking of the French official method as if there were one official method based on this colour reaction which was unsatisfactory?—That was the official method of the Paris municipal laboratory. Whether they have seen fit to alter their ways I do not know.

16367. (*Dr. Adeney.*) I do not think it has been adopted by the Technical Committee under the 1905 law?—No, the methods have met with considerable opposition from other workers besides me.

16368. (*Dr. Bradford.*) With reference to the point in your *précis* of the differentiation of toxic and non-toxic substances I want to be quite clear about that matter. What do you exactly include under the head

of "toxic substances"?—Do you mean the particular substances?

16369. Yes?—I include the aldehydes, the higher alcohols, and the esters as increasing the toxic value over and above that of the ethyl alcohol which is present in any spirit.

16370. Do you count all the esters?—From data, so far as I have been able to get them out, I take the toxic value of the higher alcohols in a lump as ten.

16371. You are using the word "toxic" in a physiological sense?—Yes.

16372. How is that toxic value estimated?—The two methods which I have more particularly read about are the Hæmolysis method, which was used by Professor Vandevelde, of Ghent, whom I have previously mentioned, and the sartorius frog muscle method, which you have photographs of. With regard to the higher alcohols, the values obtained by both these methods are approximately equal.

16373. The toxic action of the alcohols corresponds to the order of their molecular weights in the case of the action on muscles?—Yes.

16374. But that toxic action on muscles cannot be applied directly to the action of the same alcohols on the body, can it?—I do not quite appreciate your question.

16375. My point is this: Is it generally recognised that the toxic action of alcohols on the body generally—on man if you like—is in accordance with their molecular weight?—I am not aware of any definite experiments on that point.

16376. For instance, is ethyl alcohol more toxic to the human subject than methyl alcohol?—Possibly, certainly.

16377. I do not think that is universally agreed, is it? Is not methyl alcohol singularly toxic?—Yes, methyl alcohol is singularly toxic, but methyl alcohol is not present in brandy.

16378. No, I am not on that point. I am on the point of the toxic action of the alcohols being in accordance with their molecular weight. It may apply to these muscles generally, but it cannot be held to be proved to apply to its action on the body generally, can it?—No, I think not, but that is to my mind the only method applicable. The human subject is not a convenient subject.

16379. But it does become a matter of some importance if you are going to classify these bodies into toxic and non-toxic, does it not?—That is true. I have made my calculation on the general calculations upon datum that the toxic values of these higher alcohols is 10 if that of ethyl alcohol is 1.

16380. (*Dr. Cushny.*) How do you arrive at 10?—Ten is the average of the determinations made by this frog muscle and the Hæmolysis method. The values to be obtained from both these methods are approximately equal.

16381. Do you mean the higher alcohols? Propyl, butyl, and amyl alcohol are on an average 10 times as toxic as ethyl alcohol in the Hæmolysis method?—Yes.

16382. (*Dr. Bradford.*) Will you put in the reference to that?—I have already put it in. The two methods give very similar results. I have taken the value of the esters as 20. That is only a rough approximation, because they do differ so very widely.

16383. They are all based on these frog muscle experiments?—No, on the Hæmolysis experiments.

16384. As regards these photographic tracings that you have handed in, are you quite satisfied that there is any very profound difference in that one, for instance, between the action of ethyl alcohol, 5 per cent., and a certain Cognac brandy?—No. What I said was that they showed no appreciable difference. According to my calculation there should only be a 5 per cent. difference, and the toxic effect of this particular sample of brandy should be attributed almost wholly to the proportion of ethyl alcohol present. This result is in accordance with experiments which have been carried on in the United States with regard to digestive value. I refer to page 214 of Chittenden's experiments. This is the passage to which I refer, "Retardation of a proteolysis is quite pronounced with 10 per cent. of brandy, but with 1 per cent. it is comparatively slight. Unlike whiskey, however, the action of brandy is due almost entirely to the alcohol it contains."

16385. To go back to this tracing for a moment, do I understand that experimentally there was no material difference observed with regard to the action of ethyl alcohol and a certain brandy of the same alcoholic strength?—That is so.

16386. Whereas, theoretically, by calculation of esters, and so forth, you would have expected to get a difference?—Yes, of 5 per cent.

16387. But as a matter of fact, experimentally no difference was observed?—That is so.

16388. There is a conflict between the experimental results and the deduction?—Yes, only 5 per cent. The whole question would depend on whether this method could or could not detect a difference of 5 per cent.

16389. (*Dr. Cushny.*) Do you suppose that 5 per cent. is not within the limits of error?—I think there will have to be a great many more determinations made before it could be stated as a definite matter of fact that a difference of 5 per cent. could be detected by this method.

16390. Then, practically, it comes to this, there is experimentally no reason whatever to suppose that brandy is more toxic than ethyl alcohol?—It depends on the kind of brandy.

16391. Did you try any other brandy than this sample?—No; I have only done this since I was here last time.

16392. Then you have no evidence at all?—No; but I should strongly advocate experiments being done both by this frog muscle method and the Hæmolysis method with regard to the œnanthic ester, having regard to the value which has been put down by Professor Vandevelde that the toxic value of œnanthic ester is in round figures 400 if that of ethyl alcohol be taken as 1. Personally, I should like to see some form of restriction placed upon the addition of œnanthic ester in any spirit which might be sold as a brandy.

16393. But there is no experimental evidence that brandy is really more toxic than its content of ethyl alcohol?—Depending, of course, on the kind of brandy.

16394. You have no evidence with regard to any brandy, so far as I can make out. You have not tested any brandy except one form which was found equivalent to its ethyl alcohol?—I have only tested one brandy with regard to that particular point. Of course, had I known this question was likely to arise a great many more experiments would have been done.

16395. That particular brandy that you investigated was equivalent to its ethyl alcoholic contents in toxic properties?—That is so.

16396. Then with regard to esters, why do you give such a high value to the toxic esters?—From the results obtained by Professor Vandevelde.

16397. Which esters did he use?—He determined the œnanthic ester, and he determined the various essential oils; he determined the values for isopropyl formate and propyl formate, ethyl acetate and other isobutyl acetate.

16398. How did he reach his figure of 20?—Taking the average value. The average values of some of them which are certainly present. It is not intended to be an accurate estimate, but only a rough average approximation.

16399. It has not been justified in the one experiment that has been done as I understand. Your estimate has not accorded with actual facts got from this experiment?—That is true, but of course this value of the esters and the value of the alcohols, the sum total of them present in that particular form of brandy, would only be 5 per cent., that is to say, an increase of 5 per cent. over and above that of the ethyl alcohol.

16400. But you have not been able to make a calculation at all, experimentally?—No, because this is a point as to whether this method will or will not determine differences amounting to 5 per cent.

16401. What I wanted to bring out was that this question of toxicology has not really been experiment-

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ally demonstrated. This statement of the toxicity or non-toxicity has not been very satisfactorily established experimentally?—Not so far, but there is room for further investigation, which will be of considerable importance.

16402. But it has not been established yet?—No.

(*Chairman.*) The Commission are very much obliged to you for the great trouble you have taken in giving your instructive evidence, and they are very much indebted to you.

The witness withdrew.

Mons. A. Combescure.

Monsieur A. Combescure, called. (Mr. Barnett Smith acted as interpreter.)

16403. (*Dr. G. S. Buchanan.*) You are a distiller in the Midi district, are you not?—Yes, in the South of France.

16404. What kind of spirits do you distil?—Spirits of 50, or 60, or 80 degrees of strength—from wine.

16405. Entirely from wine?—Only from wine. There is no beet or grain grown in the district at all.

16406. The distillation is carried out under the supervision of the French Excise—"The Service des Contributions Indirectes," and is under the white acquit, I suppose, entirely?—It is entirely under the supervision of the Excise, and the white certificate is issued, and besides that the Excise officials are permanently on the premises.

16407. Do you do any work under the red acquit at all?—No, it is simply and solely the white permit. The red permit is not used at all.

16408. You consider that the surveillance of the Excise is a strict one as regards the origin of the wine which you distil and the character of the spirit?—It is absolutely efficacious and a perfect guarantee.

16409. The spirit is made by a process of continuous distillation, is it not?—By a process of continuous distillations from the Premier Jet—that is, it only comes off once, but it is continuous.

16410. With the aid of steam?—It is done with direct fire. We have come to the conclusion that it is very much better than using steam or other means.

16411. Can you tell us what the reason of employing direct fire rather than steam is?—By experience we have found that the wine is distilled better and more evenly, and that the spirit is rounder and softer, and that any unfermented natural wine sugars which might be in the wine are better developed by the application of direct fire than by the application of steam.

16412. Have you tried both processes?—Yes, but I do not employ steam any longer for the simple reason that the other gives very much better results.

16413. Is that usual in the manufacture of Midi spirit?—Generally the direct fire.

16414. Do you buy your wines for distillation?—We make ourselves about 80,000 hectolitres, and we buy also other wines.

16415. Is your business entirely in what you distil yourself, or is it like it is in the Cognac district that you buy what has been distilled at farms and small places?—I am a distiller pure and simple, but I also help small farmers by aiding them with capital instead of distilling all of my own wine myself.

16416. Is it common in the Midi district for the farmers to distil themselves for sale?—It is not the usual custom. There are generally one or two bigger people in the villages, or the neighbourhood, who buy the wine up from the smaller farmers for the purpose of distillation.

16417. The spirit that is distilled in this way goes by what name?—Eau-de-vie. They give it the name of the district from which it is derived—Eau-de-vie de Béziers, or Eau-de-vie de Languedoc or Eau-de-vie—whatever is the particular name of the district.

16418. Is much of it sold as it is without mixing with other spirits?—I only sell absolutely pure distillation of my own wine, or the wine I buy.

16419. That I understand, but how does that pass on to consumption? Is any of it sold as you make it, to the consumer?—We sell it very often direct to the "Liquoriste" as he is called in the neighbourhood. It is used also for the making of liqueurs—La Chartreuse, and so on.

16420. Is the principal purpose for which it is sold mixing with other spirits—for example proportions of Cognac?—The reason of distillation is that it is sold sometimes in one way and sometimes in another. I am not so well acquainted with the commerce of other parts of France as to be able to say what it is generally used for.

16421. You sell direct to merchants?—Yes, as a distiller.

16422. You say in your *précis* of evidence that the spirit preserves entirely the character of good spirits and Eaux-de-vie de vin. Can you tell us a little more of the character of the spirits that you produce?—The manner of distillation is such that the spirit keeps all its impurities or secondary products, as they are called, and, of course, with age it matures in the same way as other wine spirits mature and increases in value.

16423. Can you tell us the relative price of your spirit when distilled and ordinary Cognac?—The price in my district for the new spirit as it comes off the still—there is no question of wood, or anything of that sort, but absolutely the price as it comes off the still is about 72 to 75 francs per hectolitre at 60 degrees, or four over proof English.

16424. How does that compare with an average Cognac coming off the still? Perhaps Mr. Barnett Smith could give us that information.

(*Mr. Barnett Smith.*) The cheapest district we have got in the Cognac would work out off the still new, as we call it, that is to say, absolutely without any extra charge for cask, to about 3s. to 3s. 2d. a gallon. That, of course, is without any commission or casks or any possible expenses.

16425. (*Chairman.*) Would you compare it like for like if you can?

(*Mr Barnett Smith.*) I have worked the figures out at the same strength new.

16426. (*Dr. G. S. Buchanan.*) Could you now give the information for which I asked you the other day?

(*Mr. Barnett Smith.*) Yes.

16427. (*Chairman.*) Will you tell us what it is?

(*Mr. Barnett Smith.*) I worked out the prices as Dr. Buchanan asked me the other day, and the actual price per liquid gallon as run off the still, that is to say, as it absolutely comes off brand new from the still without any extra expense attached to it at all. I took out the figures for the different districts for the last three or four years and the price for the Champagne district, which, of course, is the best district, works out at about an average of 7s. 2d. or 7s. 3d. per gallon.

16428. (*Chairman.*) Does that include Cognac?

(*Mr. Barnett Smith.*) That is the Champagne district, the best district of Cognac, and that is the Grande Champagne at 60 degrees—four to five degrees overproof. Every year the prices differ according to the price of the wines. It is impossible to lay down any fixed law. If we had a bad year this year it might be 9s. a gallon, or if it was a very good year it might be less. I worked out the average cost of the wine for the last four years. The average cost of the different districts worked out at 4s. 10d. per gallon—five degrees overproof.

16429. (*Dr. G. S. Buchanan.*) That is all four districts together?

(*Mr. Barnett Smith.*) Yes. The dearest one, Champagne, was 7s. 2d., and the cheapest district, the Bois, the outlying district, was 3s. 2d.

16430. (*Dr. G. S. Buchanan.*) Now could you give us the Midi spirit?

(*Mr. Barnett Smith.*) In the Midi district it worked out at about 1s. 9d.

16431. (*Dr. G. S. Buchanan.*) Could you give us the grain?

(*Mr. Barnett Smith.*) Grains and beets about 1s. to 1s. 2d.—the beet, of course, being the cheaper of the two.

16432. (*Chairman.*) Are they called brandies?

(*Mr. Barnett Smith.*) No. Dr. Buchanan asked me to give grain spirit and beet spirit—the industrial spirit. Of course, these figures, as far as the Midi and grain spirit are concerned, have been taken from the price lists.

16433. (*Dr. G. S. Buchanan.*) Could you tell us anything about the use of damaged wines in distillation and the disposal of damaged wines by sending them to be distilled?—It is very slight. The only way in which they are used is for the industrial alcohols when they are highly rectified, but they are used with different apparatus to what I use for the eau-de-vie for consumption.

16434. Are there stills like our patent stills in the Midi for highly rectifying alcohols?—There are perhaps one or two. They are very few indeed in the South of France, but they are used for that purpose.

16435. For dealing with wines which could not otherwise be disposed of?—And for highly rectifying spirits.

16436. (*Dr. Adeney.*) Could you give us the relative prices?—I do not actually know the figures, but the difference is not very great, as there is a lot more wine used in the manipulation and it costs a lot more money. There is a certain amount of loss in the process of distillation to get these alcohols to the very high strength necessary so that the actual difference in price is small.

16437. Is that compared with a grain spirit—a highly rectified wine spirit as compared with a grain spirit?—Yes, there is a difference of at least 45 francs per hectolitre in favour of the wine spirit. The wine spirit is almost half as much again, or double what the grain spirit is.

16438. (*Dr. G. S. Buchanan.*) Is that additional value due to the character it has in secondary products—does it make it more suitable for blending or for drinking?—It is a superior quality of spirit.

16439. Can you give us any information as to the total manufacture of brandies in the Midi and the total output of the district?—About 100,000 to 120,000 hectolitres proof strength spirit. I have not the actual figures at all; I am speaking from memory.

16440. What is your own output per year if you would care to state it?—Of course, it varies according to the years, but it is anything from 20,000 to 25,000 hectolitres of proof spirit.

16441. Are any spirits distilled in your district, besides these highly rectified spirits that you have been speaking of, which are comparatively neutral and tasteless, that are sold for blending, or made for blending?—There is absolutely nothing but the wine spirit distilled there. There is no other spirit of any kind.

16442. (*Dr. Adeney.*) I am under the impression that at our last meeting one of the French witnesses told us there was some highly rectified spirit, or, at any rate, patent still wine spirit which could be got quite as cheaply as grain or beet spirit.

(*Mr. Barnett Smith.*) I do not know where it comes from. I was not here when that evidence was given.

(*The question was translated to the witness.*)

(*Witness.*) I do not know. It is double as much, if not more.

16443. (*Dr. G. S. Buchanan.*) Do you export spirits direct to other countries—England for instance?—No, only for France inland.

16444. A large amount of your spirit would go to the Cognac district, I suppose?—A portion of it. I do a big business all over France, and it is only a portion of our own distillation which comes into the Charente districts.

16445. (*Chairman.*) To whom do you sell your production, what class of individuals?—I do a pretty general business, but the greatest proportion of my business is done with the "débitant," that is the man who supplies the consumers direct.

16446. Would that answer to what we should term an intermediary?

(*Mr. Barnett Smith.*) It would answer to our publican or grocer. There is no intermediary in France.

16447. (*Chairman.*) Does he sell direct to the person who dispenses?

(*Mr. Barnett Smith.*) He does.

16448. (*Chairman.*) Are you quite sure that none is exported to foreign countries? Do you know enough of what becomes of your commodity to tell us that?—I really could not say. I think that most of my produce would be consumed in France.

16449. And you tell us that your produce is much cheaper in price, especially than the Champagne district produce, and also the Cognac district produce?—The Champagne district is the Cognac district.

16450. There is a great difference between the price of the witness's commodity and the commodity coming from the Champagne Cognac district?

(*Mr. Barnett Smith.*) There is a great difference between it and the better class of the Cognac districts, but not an immense difference between it and the inferior districts.

16451. (*Chairman.*) Is this commodity of yours produced in the Midi sold in the cafés of Paris or elsewhere in France as either fine champagne or as ordinary eau-de-vie?—It is always sold as eau-de-vie, pure wine.

16452. But it would not be sold to a customer who asked for fine champagne?—No, the law would not allow them to sell it as such.

16453. Do you think there is any spurious trade in your commodity, and that it is being sold as the better class article?—It is quite impossible for me to say. I do not know.

16454. Would the customer know the difference if he asked for the one and got the other? What do you think would be the case?—It is quite possible he would not know.

16455. (*Dr. G. S. Buchanan.*) Do you send out any spirit in bottle at all?—No.

16456. Do you mark your casks?—Yes.

16457. Under what designation?—There is no mark except my initials on the casks.

16458. The casks are not marked as containing eau-de-vie or any other form of spirits?—No; the casks are all sent back; they are simply transport casks; they are not marked at all except with the initials of the man who sells them, so that he can get them back again.

16459. How are the spirits described in the invoices or on the acquits?—Eau-de-vie, pure wine. It is accompanied with the certificate, of course.

16460. Is that in all cases delivered to the merchant or the person who purchases it?—The acquit d'origine accompanies it and is also delivered to the person who buys.

16461. And it also states that it is an eau-de-vie de vin?—Yes.

16462. Do the distillers in the Midi object to the delimitation of the Cognac area that we have heard about?—I do not see any reason why they should. There would be nothing to say one way or the other.

16463. (*Dr. Adeney.*) Would your product be sold in Paris restaurants as "Fine"?—No, I do not think it would be.

16464. Could you give us a diagram of the still that is used?

(*Mr. Barnett Smith.*) M. Combescure made me rather a rough sketch this morning of the still, which he himself employs, and which is generally employed in the South of France, and he said he would be very pleased to send you a photograph of one if you would like to see it.

16465. (*Dr. Adeney.*) We should like to see it with a brief description of the manner of its working.

(*Mr. Barnett Smith.*) He would be very pleased to send you one on his return.

16466. (*Dr. Adeney.*) I take it it is a pot still with a rectifying head?

(*Mr. Barnett Smith.*) There is no rectifying head. There are certain plateaux or plates in order to get the higher or lower strengths and a continuous jet, but there is no question of rectifying; there is no means of rectifying and getting off certain oils, or certain higher alcohols, or anything of that sort. It is simply a continuous distillation, and by turning certain taps at different heights to these plates they can distil either at a low or a higher strength. There is no question of rectification in it.

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16467. (*Dr. Adeney.*) What strength do you run the brandy at?

(*Mr. Barnett Smith.*) They can distil as low as 48 or as high as 85 in the same continuous distillation.

16468. (*Dr. Adeney*) (*to the Witness.*) What strength do you use?—About 52 or 70.

16469. Then I take it, as in the Cognac district, you get the tête and seconde?

(*Mr. Barnett Smith.*) No, this is continuous all the while. There are no brouillis at all.

16470. (*Dr. Adeney.*) No feints at all.

(*Mr. Barnett Smith.*) No feints at all. It all comes continuously all the time; one continuous distillation.

16471. (*Dr. Adeney*) (*to the Witness.*) I do not know that I quite understood what you said with regard to the Régie control. Is the Régie control in your district different from that which the Commissioners saw during their visit to Cognac?—It is exactly the same as in Cognac. They may come a little more often than they do there, but all the wine is taken into account, and of course the spirit has to agree with the figures that are given to the Excise and which ought to be there after the distillation of such wine.

16472. But the still during distillation is not under lock by any Régie officer, and the warehouse is not under lock and key?—No, it is not under lock and key. It is simply that the wine is there, and it must produce so much. Wine comes in with permits and the brandy goes out with permits, and you have got your books, which are under control every day or whenever they like to come in.

16473. Did I understand you to say that the Excise officials are always present in a distillery?—They are not always present.

16474. One question as to the age. Is your spirit put on the market quite new, or is it aged beforehand?—Most of the spirit is sold before the next vintage.

16475. (*Mr. J. Y. Buchanan.*) I want to ask you a question about the still. It is a distillation of multiple effect by stages, is it not?

(*Mr. Barnett Smith.*) It is. There are plates there, but it is continuous. I can explain that.

16476. (*Mr. J. Y. Buchanan.*) And the spirit comes away at 50 degrees.

(*Mr. Barnett Smith.*) You can average it as you like it. You can run off at 50, 60 or 80.

16477. (*Mr. J. Y. Buchanan.*) Is most of it taken at about 50 to make eau-de-vie?

(*Mr. Barnett Smith.*) The general type is about 50 to 52.

16478. (*Mr. J. Y. Buchanan.*) And if he wishes to make rectified spirit to sell to distillers for making alcohol?

(*Mr. Barnett Smith.*) Personally the witness has no rectifier on his premises. He might make it up to 80, but that is not a rectified spirit.

16479. (*Mr. J. Y. Buchanan.*) That is not a rectified spirit.

(*Mr. Barnett Smith.*) No.

16480. (*Dr. Adeney.*) Where are the lees? There must be some lees?

(*Mr. Barnett Smith.*) Not in the new wines. We do not get any lees in new wines in Cognac. The wine has not had time to settle down and get into wine when it is distilled.

16481. (*Dr. Adeney.*) I take it from a given charge the wine is distilled down to water?

(*Mr. Barnett Smith.*) That is simply turned out into the street.

16482. (*Mr. J. Y. Buchanan.*) Does it go on continuously?

(*Mr. Barnett Smith.*) We have from time to time to turn a tap on to refill it.

16483. (*Mr. J. Y. Buchanan.*) And run in fresh wines?

(*Mr. Barnett Smith.*) But that wine is coming through those plates all the time.

16484. (*Mr. J. Y. Buchanan.*) What length of time does that still go on? It recharges itself as it goes, but it will have to be stopped to be put right again?

(*Mr. Barnett Smith.*) You have to clear it out perhaps once a week or perhaps once in ten days.

16485. (*Dr. Adeney*) (*to the Witness.*) Do you produce any Marc brandy?—Yes.

(*Chairman.*) We thank you very much for your trouble in coming here and giving evidence.

The witness withdrew.

Adjourned for a short time.

Mr. Arthur Mellor Bramall, re-called.

Mr. A. M. Bramall.

16486. (*Chairman.*) You have, I think, already appeared as a witness before this Commission, and you then stated that you were the solicitor to the Islington Borough Council?—Yes.

16487. In the month of March, 1904, were you instructed to support certain summonses that had been taken out in relation to the sale of spirits?—Yes.

16488. By whom were you instructed?—By the Islington Borough Council.

16489. There were, I think, nine summonses?—Yes.

16490. They were summonses taken out, of course, before the magistrate?—Yes.

16491. Who was the stipendiary magistrate?—Mr. Fordham.

16492. I think in the end you came to a discreet and wise arrangement to take one summons as being a representative summons in order to save expense?—Yes, the defendants chose among themselves whose case should be taken.

16493. What was the name of the one selected?—Hillyer.

16494. I believe that case was chosen by the defendants as a test case?—Yes.

16495. That they thought it advisable to take?—Yes.

16496. As far as you know it did fairly represent the others?—Yes; they varied in the amount of silent spirit used, but it was about the average.

16497. I think you are aware by whom the defendants were defended?—Yes; I understood they were defended by a trade association, or two trades associations, I think.

16498. Under what Statute did you take out your summonses?—Under Section 6 of the Sale of Food and Drugs Act, 1875.

16499. Was that the same as in the whiskey proceedings?—Yes, the same.

16500. Did you appear in support of the summons?—Yes.

16501. The defendant's were represented by an eminent King's counsel, Mr. Avory?—Yes, and Mr. Bonsey.

16502. Will you tell me, first of all, in general language, and not in technical language, what was the substance of your complaint?—In this case our complaint was that 60 per cent. of the spirit in the bottle was not brandy, but was a silent or neutral spirit.

16503. I suppose you proved, in the first place, that somebody purchased something?—Yes.

16504. And that that somebody who had purchased something had asked for brandy?—Yes.

16505. And that when asking for brandy they had received something which had been subjected to analysis, which you produced?—Yes.

16506. The nature of the purchase was for the purposes of the prosecution?—Certainly.

16507. In the usual way?—Yes.

16508. And then, having obtained it, it was submitted to the analyst?—Yes.

16509. Was that Dr. Teed?—Yes.

16510. Now will you go back to the answer you were giving me a little while ago? Speaking in general terms, what was the nature of your complaint? When you opened your case to the magistrate you had to tell him the nature of your complaint?—Yes.

16511. What did you tell him then?—Generally, I said that brandy had been asked for, and that a spirit had been supplied which, as regards 60 per cent. of it, was not brandy.

16512. Did you ear-mark your spirits by any name, grain spirit, or anything else?—No.

16513. Something was supplied to represent brandy?—Yes.

16514. Which you said was not brandy?—I said it was adulterated to the extent of 60 per cent.

16515. In that respect you had to seek the aid of Dr. Teed, your analyst?—Yes.

16516. It will save time, perhaps, if I ask questions, as it were, in double form. Did Dr. Teed make a certain statement to you, or give you a certain analysis which was afterwards proved before the magistrate?—Yes; he did not give me details of the analysis, but he gave me rather the result that he had arrived at, which I told the magistrate in opening, that there was 60 per cent. of silent or neutral spirit.

16517. That would be for your opening. We will get the analysis afterwards. I suppose Dr. Teed put in a more detailed analysis?—No, not in a very great detail.

16518. But he did put in his analysis?—Yes.

16519. Can you now give the Commission a little more in detail your statement and what really was proved? You proved that 60 per cent. was neutral spirit?—Yes.

16520. Was it ear-marked to show what it was?—No, I think we rather put it that you could not tell what a neutral spirit had come from.

16521. What was your case beyond the 60 per cent.? What did you find that they had sold as brandy?—That 60 per cent. was neutral spirit and the rest brandy.

16522. Brandy from the grape?—Yes, brandy from the grape.

16523. You could not, I suppose, differentiate between the quality of the brandy that was there, but there was some brandy?—Yes, there was some brandy.

16524. Would it come to the 40 per cent.?—Yes, I think so.

16525. That would be some that had been distilled from the grape?—Yes.

16526. That was your case?—Yes, but we went beyond that; there was analytical evidence, and there were two analysts called to support Dr. Teed in his analytical figures.

16527. But that was your case?—Yes, I went beyond the analysis. I said that on tasting it the analysis was confirmed.

16528. Your complaint was that the evil deed that the defendant had done was in selling as brandy 60 per cent. of neutral spirit, and only 40 per cent. brandy?—Yes.

16529. Did you have any information as to where the article had been manufactured?—I do not think we had until we got into Court and heard the evidence of the other side. I do not think we knew, but we thought we knew who had imported it and sold it to the defendant.

16530. You did not treat it as being British brandy or anything of that kind, but you treated it as being an imported or adulterated article?—Yes, it was not British brandy.

16531. Having made your statement, you gave your evidence?—Yes.

16532. You called, of course, your analyst, Dr. Teed?—Yes.

16533. Of course, you proved, first, your purchase?—Yes, the formal proof. There was no discussion as to that.

16534. And then you called your analyst and some witnesses to support him?—We called two other analysts to support him, one of whom was the Commissioner the "Lancet" had sent into the Cognac district, who gave evidence as to the manufacture of brandy there, and the other was Dr. Hewitt, a chemist, who has given great attention to the analysis of spirits. Then we called Mr. Pheysey, whom the Commissioners have seen here, who said what brandy was understood to be by the trade and the public. He also said that he had tasted part of this sample and that it was not brandy, and from the point of view of the expert taster he supported Dr. Teed's analytical result.

16535. You say "expert taster." That is a term that has been applied by the public to a man who knows brandy well, but there is no office of taster?—I think the men who are employed are called dock tasters. This particular sample had been tasted by dock tasters.

16536. But for the purpose of evidence before a magistrate they are not employed?—No.

16537. That was your case?—Yes.

16538. At the end, Mr. Avory, for the defendants, made a statement and called witnesses?—Yes.

16539. I gather from what there is before me that there was an admission made by him on behalf of the trade defence as to what ought to represent brandy?—I do not think he quite admitted it. He said there were two questions: First of all, whether brandy must be the result of the distillation of grape juice, and he said that, although he would not dispute it on this particular occasion, he would contend, if necessary, that it might be derived from grain spirit and need not come from the grape.

16540. Then, as regards that case, his defence was that the analysis of Dr. Teed could not be relied upon?—Yes, he said he would let that go for the time being, but he admitted that practically there was 60 per cent. of rectified spirit in the sample, and he said that no analyst in the world can tell what the source of that rectified spirit has been, that it may have been grape spirit, and, if so, if brandy is the result of distilling grape spirit, it is for the prosecution to show affirmatively that it does not come from grape, and you cannot tell by analysis where it has come from.

16541. That you must not take it as a general admission in all cases, but that was dealing with his particular case?—He was dealing with the particular sample.

16542. Did he call witnesses?—Yes, he called a considerable body of evidence.

16543. Did any witness in that case put forward the contention that the brandy need not come from the grape?—Yes, all the trade witnesses did.

16544. And contended that a neutral spirit would do?—Yes, and one of them said that it might be derived either from grain or from beetroot.

16545. That was rather going beyond Mr. Avory's defence?—I think it was.

16546. Was any contention put forward as to the proportion of the grain?—I tried to fix them as to that, but I could not.

16547. Did not your cross-examination succeed?—We got them up to a pretty high figure, and then they began to jib, I was going to say.

16548. I suppose that is often the result of cross-examination?—It often is. I think I got them up to 90 per cent. of grain spirit, and they began to hesitate at that.

16549. What was your cross-examination as to the taste? If it was made of grain spirit, did it taste like brandy?—I do not think it did. With 60 per cent. of grain spirit in it it would taste like very inferior brandy, but there would be a brandy taste in it.

16550. Will you take the case before Mr. Fordham? Had you evidence or not as to whether that sample tasted like brandy?—Mr. Fordham rather suggested that evidence of tasting was not of much avail, but the gentleman who had sold the so-called brandy to the defendant admitted, under considerable pressure, that when he tasted it when he bought it he came to the conclusion that there was a large proportion of grain spirit in it.

16551. Who did that?—The gentleman who had sold the spirit to the defendant, the merchant who had sold it.

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16552. He was an Englishman?—Yes, he was an Englishman in the City.

16553. He had brought it from where?—From the Cognac district.

16554. Did you go into the question of price?—The defendant would not allow us to see the price that he himself paid, and Mr. Fordham gave way to him in that, because the defendant said there was a large number of competitors in the court. The court was full of people in the trade, and the defendant gave the price to Mr. Fordham. I think very likely I saw it at the time, but it is five years ago, and I cannot say from memory what it was, and there is no record of it on the shorthand notes.

16555. Mr. Fordham was satisfied?—Yes. Mr. Fordham saw it, and the price was kept secret.

16556. There was no evasion of justice?—No. I should not like to say now from memory what it was, what was the price that this gentleman, the merchant here, paid to the Cognac merchant.

16557. It is advisable to see whether any very exaggerated profit has been made by this system of trading?—Unfortunately, I cannot give you a figure.

16558. At any rate, the defendant did not wish it to be made public, and he handed the price to Mr. Fordham?—Yes. I think one draws an inference from the fact that he did not wish the price to be made known.

16559. Did you go into general evidence to show that this grain spirit would be cheaper, and, as a rule, very much cheaper, than the juice of the grape?—I do not think there was any specific evidence on that. There was this: That one reason the merchant gave for admitting that it was grain spirit was that the price he had paid was so low that it could not be anything else.

16560. You called one witness to prove what was generally known, or ought to be known, as brandy?—Yes, the analysts said the same thing, they gave the same definition.

16561. Did the defendants call any witnesses at all on that subject?—Yes, the trade witnesses were largely called on the point of what was brandy.

16562. But as to the use of the name in commerce, did they say that this neutral spirit or grain spirit was commonly used and sold under the term brandy?—Not by itself, but mixed with Cognac, they said, and they said that for 40 years it had been sold.

16563. Their evidence was that it would be known by the name of brandy commercially?—Yes, they said so.

16564. Did you at that enquiry go at all into the question of pot still and patent still mode of manufacture?—At first not, because I personally, and I think the gentlemen who were helping me were in the same position, did not know that wine spirit was ever put through a patent still. It was only when Mr. Avory suggested it in cross-examination that this neutral spirit may have been wine spirit from the Midi, or from other parts of France, that we began to know that there was a possibility, at any rate, of wine spirit going through the patent still.

16565. When that suggestion came to your mind on Mr. Avory's cross-examination did you then use the argument at all?—Yes. We then said that it must go through a pot still to be brandy.

16566. Was it your contention that the French people in producing brandy for their home consumption are bound to use the old pot still and may not use any improvement upon it?—I do not think I could have put it in that way.

16567. But you must have put it, because this is a French commodity?—Yes, but they have not the word "brandy" in France.

16568. But, according to you, if you make fine champagne in a Coffey still, or any other still, the French people are committing a fraud, because it is not made in a pot still?—My position was, and is still, that that would not be brandy.

16569. But supposing the French people make brandy, they know what brandy is, and they are the manufacturers. Are they not the best judges of the method you use?—I do not think they claim to make brandy in a patent still.

16570. But they do do it? Are the Customs to prevent the importation of brandy that is not made in a pot still?—I should not like to say that. That would involve to a certain extent the question of marks, and the powers of the Customs. I should be glad if they could.

16571. But they ought to, if your argument is true, that this person ought to be convicted?—It had been put in this case that this wine spirit put through a patent still was so far neutral and silent spirit that nobody could tell what it had come from. Our case was that brandy was a distinct spirit from other kinds of alcoholic spirits because it had certain attributes, taste, odour, and medical results, and if that were true it would be impossible to say that a spirit that had been deprived of all its characteristics, or the greater part of them, could be considered brandy.

16572. I am not now on the question of patent or pot still method of production. You submitted that point to Mr. Fordham?—Yes, and he accepted it.

16573. The result was that the defendants were convicted?—Yes.

16574. And they were fined?—Yes. I think it was a nominal sum of £5, and £50 costs. That was as to this particular defendant.

16575. There was no appeal?—No.

16576. There was an appeal in the whiskey case, but no appeal in the brandy case?—There was no appeal in this particular case.

16577. Or in the test cases?—I was distinguishing the Kensington case, where there was an appeal. There was no appeal in the Islington case.

16578. Was the Kensington case with regard to brandy?—Yes. The position they were in at the end of Hillyer's case was this. They called some very distinguished analysts who agreed with us that brandy must be a spirit distilled from the grape, so that the trade evidence really was deprived of any value, because their own witnesses had said that it must be grape spirit. Then the contention was: "You cannot tell what this has come from"; but when the merchant who actually sold the sample admitted that it was grain spirit all the analytical evidence as to whether you could tell analytically or not ceased to be of any importance and became quite immaterial, because we proved, in fact, that it was a grain spirit. Really the defence was over when that admission was made, and the case went on after that in a very half-hearted way.

16579. Will you give us the names of the gentlemen who came as skilled witnesses and said that the brandy must come from the grape?—Dr. Gordon Salamon and Mr. Hehner on the defendants' side.

16580. Then the case must have presented a somewhat different aspect from what it presented before?—Yes. Mr. Avory was going to argue it on the hypothesis that it must be grape spirit—he guarded himself from making an admission that could be used in any other case—but it might be a highly rectified grape spirit, and when his own witness admitted that it was a grain spirit his case was gone.

16581. Dr. Teed could not prove that it was not grape spirit?—He could not prove that it was otherwise than wine.

16582. I suppose the analyst had made an analysis?—Yes, Dr. Hehner had, but I think he was the only one.

16583. That changed the face of the case considerably?—Yes, when that admission was made by the trade witness.

16584. Have you anything you would like to say in respect of the Islington case?—No, I do not think so, except that I should like, if I might, to read to you Mr. Avory's words. I do not want to misrepresent him, and it would have been quite unintentionally if I have done so. I should like to read Mr. Avory's own words as to the way he put his case.

16585. I think that would be better, probably, if you would do that?—It was a very long speech, but I have tried to select the material parts. Mr. Avory said that the question was whether brandy in a commercial or popular sense meant a spirit derived from wines only, and that all the dictionaries referred to seemed to agree that while undoubtedly that was the original meaning of the word, and while he should not dispute it, they all agreed that it was then understood to mean a spirit distilled from other sources, but

he submitted that it was not necessary to decide that; he would assume for the purposes of his argument that brandy should be a spirit distilled from wine only, but that the evidence in the case as it stood altogether failed to establish the second proposition, namely, that the sample in question was not distilled from wine only. It would be proved, he said, that the brandy in question was received direct from Cognac. He criticised Dr. Teed's analysis, because it gave three only of the important elements which are said to exist always in brandy, while he omitted to ascertain the aldehydes or the higher alcohols. Dr. Teed's evidence, Mr. Avory said, was perfectly consistent with the 60 per cent. of which he complained being derived from wine which had been distilled in a still other than a pot-still, because spirit derived from wines distilled in a patent still was indistinguishable from spirit derived from other sources and similarly distilled, that the greater proportion of brandy in France was distilled in stills which might be called generically patent stills, which do in fact remove these impurities to a large extent if not entirely, and that the spirit there produced is, as in this case, blended with Cognac for the purpose of giving it the necessary flavour, that much more than half of the brandy exported from France is made in that way by the small farmers, the farmer distils his own spirit from his grapes——

16586. (*Mr. Guillemard.*) Is that always in a patent still?—I cannot tell you that. I am reading Mr. Avory's own words. He said that the farmer distils his own spirit from his grapes, and according to the character of the wine which he has to use, whether it is from sick or from sour wine, the process of distillation has to be more complete because the more sick the wine the more necessary it is to remove the flavour by distillation. The farmer then blends the spirit with brandy or sends it to be blended with some of the best Cognac for the purpose of giving it the necessary flavour, and in the result that spirit which has been distilled from wine in that way on analysis is absolutely indistinguishable from spirit which has been distilled from grain or other sources; the witnesses for the prosecution had based their opinion on the theory that all brandy was made, or ought to be made, in a pot still, but with spirit distilled from wine in a patent still the effect is to remove the impurities to such an extent that no chemist upon analysis could say whether it was silent spirit produced from wine or a silent spirit produced from grain. A man making brandy does not take out more of the attributes of brandy than he can help, he takes so much as is necessary to remove the sour or sick character of the wine he is using; but if such wine, which is largely dealt in for the purpose in France, and perfectly legitimately, were distilled simply in a pot still it would not be palatable or merchantable. Then Mr. Avory ended up with these words: "I say, and I think I will satisfy you by the evidence that is going to be called, that once it is admitted that spirit is in fact derived from wine by distilling it in what are called patent stills, you cannot upon analysis distinguish that from a spirit derived from grain or other sources, and that consequently if you cannot distinguish them it follows that this analysis as it stands is just as consistent with this having been distilled from wine entirely as having 60 per cent. of it distilled from other sources." That is a summary of his speech.

16587. (*Chairman.*) You have been good enough to set out in your *précis* a good deal of the evidence given by the other witnesses, but for myself I think I have asked you what has been sufficient to bring before the Commission what really did in substance take place?—I think so, my lord.

16588. Do you wish to add anything?—The defence came to this, that the analysis was insufficient to enable anybody to say what the spirit had come from. That was the fault of the spirit, and not the fault of the analyst.

16589. You mentioned just now the Kensington case?—Yes.

16590. What was that?—That was a summons for selling brandy not of the nature, substance and quality demanded.

16591. Were you concerned in it?—No.

16592. Was it a similar case to yours?—Yes, I think almost exactly similar. I have read the shorthand notes of it for the purpose of this inquiry.

16593. Was there a conviction there?—Yes.

16594. When was that?—In 1905.

16595. I think your case gives us what we want. We want to see what the law is?—There is this difference between the two cases. In the Kensington case they set up a standard of others of 80 parts per 100,000 of alcohol. We did not set up ourselves an analytical standard. Our witnesses were cross-examined as to what was the basis on which they formed their opinion but we did not put forward any analytical standard.

16596. I think your case is the better example?—If you please. May I point out that there was a case in Scotland earlier than ours in which a very able analyst, Dr. Clark, of Glasgow, was the public analyst, and he put the standard of others, I think, at 84 parts per 100,000. That was brandy, and there was a conviction there. That went to the High Court of Justiciary in Scotland.

16597. And was affirmed?—Yes, it was affirmed, but it went on points of law.

16598. I will not go into that. I am satisfied with this case at present. We must confine our attention to-day to this question of the brandy case. You had the conduct of this case, and you had to take charge of it in court and advise on it?—Yes.

16599. You proceeded under the Sale of Food and Drugs Act, and obtained a conviction?—Yes.

16600. Upon this case have you any suggestion to make as to any alteration of the law that would be beneficial?—Yes.

16601. Will you let us have what your suggestion is?—I think it puts a very great difficulty in the way of the public authority in carrying out the duties under the Act, or what ought to be the duties, that a chemical analysis is, so far as we are concerned—and when I say "we" I mean so far as the public authorities are concerned—a condition precedent, while I believe if a private individual likes to prosecute the analysis is not a condition precedent. For the local authority the analysis is a condition precedent, which I do not think is right. It has gone so far as this, that in a case where the defendant admitted his guilt to the inspector, the Court dismissed the summons because there had been no analysis. In that case the local authority had thought that it would be an unnecessary expense to the defendant to have an analysis, and the case was dismissed although it had been admitted because they had not got an analysis.

16602. (*Mr. Guillemard.*) Under what section of the Act is the analysis made obligatory?—I think it is Section 14.

16603. (*Chairman.*) I want to see to what subject matters the analysis must go?—Everything that a public authority does.

16604. Supposing they were prosecuting as to red herrings?—That is one of the things that I complain of.

16605. Let us see how far it affects a red herring analysis. Section 14 says: "The person purchasing any article with the intention of submitting the same to analysis"—that is the intention—"shall, after the purchase shall have been completed, forthwith notify to the seller, or his agent selling the article, his intention to have the same analysed by the public analyst, and shall divide the article into three parts"—but that must be with the intention of obtaining an analysis?—We cannot take samples except with the intention of analysing them.

16606. Supposing a man goes into a shop and buys something that cannot be analysed by the public analyst, according to this statute, unless he states that intention at the time he buys?—We can only buy things of this kind in a shop with the intention of analysing.

16607. And you say that a local authority cannot purchase for itself?—That is so.

16608. It can purchase for the purpose of prosecution?—Yes.

16609. Do you say they can purchase for the purpose of analysis?—I think that section says so.

16610. The section says this: "The person purchasing any article with the intention of submitting the same to analysis." Supposing they came to you and you said: "Yes, we can prosecute; we can do without an

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analysis"?—If it were *res integra* I should like to say so, but I am afraid I am precluded by the decisions of the Courts from saying so. There is the case of Smart and Son *v.* Watts, reported in 1895, 1 Queen's Bench Division, at page 219. I wish in these cases we had the chance of going beyond the Divisional Court. Because this is a criminal case we cannot go beyond the Divisional Court, not only in these Food and Drugs cases but in Public Health cases, where a very large amount may be involved. We had a case the other day which involved £10,000 a year, and we could not get beyond the Divisional Court.

16611. I think the better way will be if you will continue the answers you were giving to my questions. You recollect I asked you whether you could suggest any alteration in the law?—May I read the headnote in the case I just now mentioned?

16612. Yes.—"The notification required by Section 14 of the Sale of Food and Drugs Act, 1875, to be given by an inspector after the completion of a purchase of his intention to have the article purchased analysed by the public analyst is a condition precedent to a prosecution under the Act, and cannot be dispensed with, although there is a contemporaneous admission by the seller of an offence against the Act. An analysis of the article purchased is also in similar circumstances a condition precedent to a prosecution."

16613. The important part is the last part?—Yes. Then there was a case before Quarter Sessions of Peart *v.* Barstow, 44 Justice of the Peace, page 699. There it was held when you take your sample, or after you have taken it, it is a condition precedent to obtain an analysis, although the analyst was called and gave evidence at the hearing of the case. You must have your analysis before you start your prosecution. It has gone as far as this: that you must say when you take your sample or after you have taken it, "I have bought this for analysis by the public analyst." It will not do to say: "I have bought this for analysis." That was the case of Barnes *v.* Chipp, reported in Law Reports, 3 Exchequer Division, page 176.

16614. Can you suggest any alteration in the law?—The result of that is that we cannot prosecute in cases where chemical analysis will not disclose the offence. As your lordship put it just now in the case of the red herrings, we cannot. Then to take another case—the question of meat. You may have Australian mutton sold as best Welsh, or Argentine beef sold as best English. I do not suppose you can tell the difference by analysis; at any rate, we have not dared to try. We cannot send two legs of mutton to Dr. Teed to see which is English and which is Australian.

16615. Do you not think he would do it?—No. I do not think he would. I think analysts rather shrink from doing these things. They have to be invited to do it. There are also many other cases, such as tea. I believe you can tell China tea from Indian tea by analysis. I thought at one time you could not.

16616. But the difference between those could be told by the taste?—Yes, in a moment. Supposing we had absolute evidence of the fact that somebody had seen this patent still spirit put into this brandy we could not have prosecuted unless the analyst said: "I can distinguish between patent still spirit and real brandy and say how much patent still spirit is here." I cannot see why, if an individual can prosecute without an analysis, public authorities should not. If the analysis is intended as a safeguard to the defendant it ought to be more important in the hands of a private individual than of a public body, who ought to be at any rate semi-judicial in the way it does its duty. I have a case here in which the Lord Chief Justice said that as regards the private individual it was not necessary, and that it was a very undue limitation to the powers given by the Act. Would you like the reference to that case?

16617. Yes?—In that case the private purchasers, who were Guardians, were prosecuting the vendors of inferior articles supplied for the purpose of the poor, and the objection was taken that it was not bought for the purpose of the prosecution, but after the things had been delivered they came to the conclusion that they were inferior. The goods were delivered under a contract, and this objection was taken by the defendants: "You ought to have informed us when you bought the goods, and ought to have given us notice that you intended to have them analysed, and that they were being bought for the purpose of analysis." The goods had not been bought with any such idea, and the Lord Chief Justice and the other Judges of the Divisional Court held that in the case of a private person it was not necessary to have the declaration of intention to analyse, or to have an analysis by the public analyst, or anybody else. What I suggest is, if it is not necessary in the case of a private person still less ought it to be necessary in the case of a public authority.

16618. You want this obligatory analysis done away with?—Yes. That was the case of Buckler *v.* Wilson, reported in 1896, 1 Queen's Bench, page 83. That was a case where margarine had been sold instead of butter. It is a long judgment, but that is the principle.

16619. (*Mr. Guillemard.*) I have been reading the paper you gave me, and I can only read it as a layman, but what this paper seems to me to show is that what is necessary is that if a person buys a thing with the intention of having it analysed it is compulsory for him to give notification of his intention. Does it also say that the analysis is necessary itself?—Yes.

16620. I had read it as only saying that if he buys it for analysis he must give notice of his intention?—Yes, he must give notice of his intention of analysing the article purchased. This is the headnote in that case: "Analysis of the article purchased is also in similar circumstances a condition precedent for prosecution." If we could administer the Merchandise Marks Act as well—and when I say "we" I mean if the public authorities could—it would be a very great advantage to the public. First of all, under the Merchandise Marks Act, no analysis is necessary; and, secondly, no sale is necessary.

16621. (*Chairman.*) What do you mean when you say: "If we could administer"?—If the public authorities could.

16622. But may they not?—No, not anybody whose money is administered under the authority of an Act of Parliament.

16623. And they also must be injured by the Act?—No, it need not be that.

16624. Under the Merchandise Marks Act a person may go in for the fun of the thing?—It would be expensive fun for him, but he may if he chooses. I have always understood, and have always acted upon it, that any one of the King's subjects may put the criminal law in motion unless there is something in the Statute to prohibit him.

16625. You are right as to the general law, but I was treating it as an offence against the person's particular interest?—It is an ordinary criminal statute, and I have always understood that anybody may put it in motion theoretically.

16626. Theoretically yes, but practically there never is a case?—Only in this way, that where we have found that a retail dealer has been selling with a misdescription, and we have come to the conclusion—I am speaking now of our private clients—that he was acting in ignorance we have, against his will, prosecuted the wholesale man who sold to him. This is what I mean. For instance, supposing we have gone to A., a small grocer, and found that he has got goods with a misdescription—say, Burgundy wine that comes from Palestine—and we have come to the conclusion that he himself has not known that there has been a misdescription, but that he has bought it from B., a wine merchant who sent him the wine with those labels on, we have prosecuted B. for selling to A. without A.'s consent.

16627. That has actually occurred in practice?—Yes. A. would not like to do it, he would be afraid to. Under the Merchandise Marks Act it is a defence to show that you have taken every precaution against misdescription, and that you are innocent of the misdescription.

16628. What alteration do you suggest?—I would suggest that you should allow the public authority to administer the Merchandise Marks Act.

16629. To prosecute?—Yes. I have tried to get the local authority to put it into force and act under it, but I have had to advise them that they might be surcharged with the expense, and they have not done it.

16630. What distinction do you draw between the burden of proof under the Merchandise Marks Act and the Sale of Food and Drugs Act?—I draw two distinctions. First of all no analysis is necessary. You need not have an analysis at all unless you like, but you may have it if you choose. Secondly, there need not be an actual sale. We are met under the Food and Drugs Act very often in this way. I will take as an instance a milk shop. The inspector's agent goes into the milk shop and sees a pan on the counter on which appears "New milk with all its cream." If that was not pure milk that would be an offence under the Merchandise Marks Act, but the vendor, if he thinks that it is an inspector, says: "This is not pure milk, but skimmed milk." To have on your counter a pan of milk labelled "Pure milk" which is not pure milk, the fact that that is on the counter for sale is an offence under the Merchandise Marks Act. The vendors are very suspicious, and we have to circumvent them in the best way we can, and if the vendor thinks when a stranger comes in that he may be an inspector's agent this is what he does. If the person who comes in says: "I want some of that milk, please," the vendor says: "That is not pure milk, that is skimmed milk," and under the Sale of Food and Drugs Act that is an answer, and we cannot do anything, because he has given notice of what it is. If we are allowed to put in force the Merchandise Marks Act where we found a misdescription of goods actually for sale we could prosecute even when the vendor said: "This is not pure milk" or "pure brandy."

16631. That would be applying the standard of proof to the Sale of Food and Drugs Act?—Yes, the moment the vendor sees it is an inspector he says "This is coffee and chicory," although it may be labelled "Coffee." If you ask for butter, although it may be labelled "Finest English Fresh Butter," if they think it is an inspector they will say: "This is margarine," and we are frustrated, and we cannot do more. So far as protecting the public is concerned there is an end of it, and we are frustrated.

16632. Will you offer us any other suggestion that you can make that you think would be an advantage in the law if altered?—I should like, if we could, to have something like the French acquit system.

16633. As applied here?—Yes. I think in many cases, if not the majority of cases, like brandy and whiskey, where you are dealing with a somewhat complicated subject, that the retailer really does not know. In the case of which I have been speaking, namely, that of Hillyer in the Islington case, I do not think he had any idea that grain spirit was ever put in brandy, and I do not think he knew anything about it. A traveller probably comes round and tempts him with what he says is brandy, and says: "This is very cheap; it is much cheaper than you can get it anywhere else," and owing to excessive competition the man is tempted to buy something cheap, but he has no idea that he is doing anything wrong. If the proper description could reach the retailer so that the retailer knew what the article was, then, so far as he is concerned, knowledge would be brought home to him, and if he sold it as something else he would be committing a moral fraud as well as a legal fraud.

16634. With regard to the imported French brandy, will you work that out?—The first thing in our view is to fix a standard of what brandy is.

16635. (*Dr. G. S. Buchanan.*) A definition?—Yes.

16636. A definition apart from the standard?—Yes.

16637. When I said "definition" I meant a definition in the terms of origin, or the terms of its nature, but not chemically. Is that what you mean?—Yes. I say first of all we want a standard fixed for several reasons, first of all from the point of view of the public. I will take brandy as a concrete case. The prosecution and the defence is a little at the mercy of each analyst in each particular county. The analyst must say what is brandy before he can say what the analytical equivalent is, and I do not think it is fair to the analyst, and I do not think it is fair to the possible defendant, that the fixing of this definition should be left to gentlemen who are chemists first, and not necessarily better informed on other subjects than other men are, to say what, as a fact, is brandy, or what as a fact is whiskey, or what as a fact is bread; so that taking the object of the Commission we do hope very much that a satisfactory standard of what spirits are may be fixed.

16638. (*Chairman.*) We, here in this country, must fix a standard of what French brandy is to be?—Any brandy, surely.

16639. I am taking France for example?—Yes.

16640. That imposes on them not what French brandy shall be, but what French brandy shall be if imported into this country?—Yes.

16641. You cannot go beyond that of course?—That is so.

16642. Therefore the brandy comes from France and arrives at our Customs Port here—Dover?—Yes.

16643. Then the question would be: Is it up to our standard of brandy? That may be, I suppose, that the whole of the brandy shall be from the juice of the grape, or 90 per cent. or some very large proportion from the juice of the grape?—I take it that under the acquit system the whole of it must be the juice of the grape.

16644. Having arrived here, what proof is the Customs officer to have that that comes up to the standard?—I only heard the witnesses here, but I imagine that the white acquit is surrendered when the duty is paid.

16645. (*Dr. G. S. Buchanan.*) It could be if it was asked for?—I understood Mr. Hennessy to say that the white acquit was given up for a congé.

16646. In France?—Yes. I should like the white acquit to follow the goods here.

16647. (*Chairman.*) We cannot do anything except say: "We shall not receive it unless you do?"—I think the French Government would be only too anxious to assist us.

16648. If we said we would not receive it unless we had it?—But I mean even apart from that. I think there has been diplomatic representation on the part of the French Government that we are not doing our part here.

16649. What you suggest is substantially possible, at any rate?—It is possible, at any rate.

16650. You would have the white acquit, and you would say: "It shall not come unless you produce it"?—Yes.

16651. You must assume that there is no fraud in the production and no adulteration as against the acquit?—Yes, you must assume that.

16652. And the difference may be, of course, worth the while of persons to commit fraud, but at present we have no suggestion that there is much fraudulent adulteration in the sending from France to this country of brandy. We know what is said about inferior quality?—I think the evidence was that there was a great deal of grain.

16653. But openly done. I have not heard any suggestion that the French merchants have attempted to defraud us?—I do not think they have. It is not the evidence here in this Commission, I agree.

16654. If it be so, of course it may be that that would be fraud. Now, having landed it as pure brandy, what are you going to do to stop, say, 30 per cent. of that pure brandy being taken out and 30 per cent. of grain spirit being put in?—I should like to stop it being done either at the Customs or Excise. I think it could be done now.

16655. As a blend?—Yes.

16656. (*Mr. Guillemard.*) You cannot blend pure Cognac or any brandy with grain spirit in bond except for exportation?—In the bonded warehouses you would have that security.

16657. (*Chairman.*) Then it goes out of bond to the middleman. I should think most of them would be honest people—the great majority would—but we must deal with it from the point of view that there may be fraud. How are you going to prevent that?—I should like first of all that the invoice should accompany the goods, and then there would be a description either true or false.

16658. The French invoice?—Or the English invoice.

16659. That is the invoice from one merchant to another?—Yes.

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16660. You are assuming two persons and I am taking one?—It goes to the English merchant with the French invoice and with the French acquit, and the merchant you assume sells to the publican.

16661. What I am assuming first is that when it came to the merchant he should be an exceptional man, that he was fraudulent, and he began to adulterate it?—He would have to send it to the publican with an invoice, and the publican would sell, if it is in a cask, across the counter.

16662. The invoice would be a true invoice if it was described as brandy?—Yes.

16663. There is no falsehood there?—No, and if it were not brandy he could be prosecuted under the Merchandise Marks Act.

16664. The man who sells could?—Yes.

16665. According to the evidence a certain amount of adulteration might still justify the use of the word "brandy"?—Of course I would hope that that would be stopped under the definition.

16666. Would there be any difficulty in the proof? Supposing there was an adulteration of 80 per cent. pure brandy with 20 per cent. of neutral spirit could your analyst always be certain of that?—No.

16667. Then where is your proof?—I am afraid that small amounts of adulteration would always go undetected. You cannot detect minute adulterations.

16668. I give you as an instance the adulteration of 80 per cent. pure brandy and 20 per cent. of neutral spirit. Can you give us an instance of where analysis would succeed in detecting it?—I should think 25 per cent. of patent still spirit might be detected; it would be difficult. It is really an analyst's question.

16669. Say a merchant has put in 25 per cent. of this grain spirit, and sends it invoiced as brandy. Of course, as you say, in the absence of the standard he may well contend that that was brandy?—He would.

16670. He sells to a publican, and the publican buys it for the purpose of selling it to his customers across the counter?—Yes.

16671. The customer who buys across the counter goes in and says: "I want a glass of brandy," and the publican gives him that which he has received under the invoice as brandy, does he commit any offence?—Yes, *prima facie* he does. Does your lordship mean under the existing law?

16672. Yes, or any law that you may impose. He purchased it as brandy, and paid a fair price for it as brandy, and knew nothing else than that it was brandy?—Morally he does not commit an offence.

16673. Do not take your standard for the present. You may frame a standard and say that no man shall sell anything that is not the full 100 per cent. of juice of the grape; but taking it without the standard where does he commit an offence?—Before you can prosecute a man you must have in your mind some kind of standard.

16674. I agree there must be some line?—Yes.

16675. That is your point, that morally he would be committing no offence?—Yes, but supposing there was a standard now technically he would be committing an offence under the Sale of Food and Drugs Act unless his invoice amounted to a warranty. The *mens rea*—the criminal intention, the criminal mind—is not necessary under Section 6. It does not matter whether a man is innocent or not. He may sell by a servant who sells against his instructions, or, as Hillyer sold, in entire ignorance of there being anything wrong, but he still commits an offence unless he comes within the Section as to warranty. Then he must have a written warranty, give notice seven days before the hearing, and send a copy of his warranty, or he cannot avail himself of it.

16676. Have you any suggestion to make as to how the customer over the counter can obtain any evidence at the time of purchase of what it is he is purchasing?—I think the ordinary customer cannot very well, but I think if a standard is fixed, and knowledge is brought home to the publican of what the spirit is that he is selling, the local authorities can quite well protect the ordinary purchaser. We should send our inspectors out, but we have suspended operations while this Commission has been sitting. When a definition is fixed, when a standard is fixed, in fact, not analytically, I have not the least doubt that inspectors will be sent out to see whether brandy sold across the counter in various public-houses is up to the standard. If we find that it is not, and a prosecution follows, I think a great many samples would be taken, and the consequences to a publican of selling an inferior article are so serious that I am quite certain that the practice would be stopped.

16677. You have had great practical experience on this subject, and you have spoken now of having a standard which applies in your case to brandy. If you apply a standard of definition to brandy on what principle are you going to limit the obligation of standard of definition to every article that is sold? If you apply it to brandy how are you going to limit the application of that principle? Why should not there be a standard of definition of every article capable of a definition that is sold to the public?—I think there should be. I do not mean to say that you should begin defining and go on defining until you have defined every article known to man, because that would be interminable; but where you find, as one is constantly finding, not only for local authorities but for private clients, that it is alleged that words that once meant one thing now mean something quite different, I think that it should be submitted to some body as it is in America, to say what the true standard is.

16678. How are we to obtain a limitation of the subjects of this definition? There is no charm in brandy, and it may be boots, or anything else?—I think boots we could define, but we may have a difficulty in defining leather. You might find that brown paper was commercially leather, or it might be said so.

16679. It would be an interference with trade?—We have to do it now.

16680. But if you are going to do it now and we had to apply it to brandy it would go on?—We realise that to the full. Although brandy and whiskey are prominent that is only a very small part of the operation of the Sale of Food and Drugs Act, and we are constantly met with this difficulty of definition.

16681. But it is not a standard definition, but a definition in every case. It is so much more easy to apply it to general cases than it is to apply it to all?—You have got for every drug a definition in the Pharmacopœia.

16682. But that is not a statute of which the Government bear the responsibility. It may be shown to be wrong, but if you give a standard by Act of Parliament you cannot alter it?—It has been decided as regards chemists that the Pharmacopœia is the standard.

16683. That is because people accept it as such, but that is different from the Legislature saying by statute that there shall be a certain standard, and no other?—The Pharmacopœia is published under the authority of a statute.

16684. I dare say it is, but you are going now to advocate that this should apply to every subject, and that that is to be done by Act of Parliament?—May I take a particular case? Assuming under the Merchandise Marks Act we find that a material is being sold as leather which consists partly of brown paper—I do not say that it does exist, but I am putting a supposititious case—and that proceedings were taken and the defendants say that commercially you may put brown paper between layers of leather. What I am putting is that somebody must say whether that is leather or not.

16685. I am speaking of definition by statute. I will tell you what Lord Bramwell said. He objected to definitions, and he said: "I object to have to define what is day and what is night, but if you will, at any time, ask me if it is day or night I will tell you in a moment." In the same way, if you have evidence as to what cider, or leather is, it is easy enough, but when you come to write down in an Act of Parliament what is leather or what is cider that is different?—I did not put it in that way. To take a particular case, you have a charge that leather has been bought which is not leather. If it is in London it comes before a competent man, a police magistrate, but if it is in the country it comes before two justices of the peace, who, it may be, are parsons or squires, or men not very competent to decide judicial matters, with the assistance of a clerk who is a country solicitor. Is that a proper tribunal to decide what is leather?

16686. No, certainly not, that is not a tribunal to define what is leather in all cases, but it has only to

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say whether that particular substance before it is leather. That is all the difference?—Supposing the defence is that leather once meant the skins of animals, but that what was formerly leather is not now leather, but now commercially means brown paper, plus leather. I am not saying that it is, but I am taking that as an illustration. That involves commercial evidence, and technical evidence, and what I suggest is that there should be some body to whom that question should be referred, and that it should not be referred to two justices of the peace.

16687. In that case the question would be whether the particular subject of the prosecution was leather or not. Then you go to experts to get the matter determined, but what you are putting now is that there shall be a standard that is a statutory standard?—It would be, in effect, statutory.

16688. But that would be merely the application of knowledge in a certain case and not a statutory standard?—I do not suggest that there should be an Act of Parliament with a schedule.

16689. Then where do you get your standard?—I suggest that the Act of Parliament should appoint some particular body, the Local Government Board, for instance, or their advisers, when a case of that kind arises, to fix, if necessary, a standard.

16690. I do not quite understand you. That is a very different thing from having a statutory standard. That is applying what I thought ought to be done, the judgment on each case to that case?—I put it not that you should have an Act of Parliament with a schedule with a series of definitions, because that would be hopeless, and they would never get it passed.

16691. I should think not, in any state?—But you have public authorities such as the Local Government Board and the Board of Agriculture, and I suggest that this question of brandy should come before them.

16692. How is it to come before them?—Assuming that in this particular case it arose, then the necessity of fixing a standard becomes apparent.

16693. For that case?—No, for brandy. I was going to suggest what the difficulty on the other side is. The difficulty we had in the whiskey case was that we got a decision that a mixture of 90 per cent. of patent still spirit, with 10 per cent. of whiskey, was not Scotch whiskey. It had been open to a very powerful trade, with millions of capital, to say: "Your decision applies to 90 per cent., but does not apply to 85," until they worried everybody with endless litigation, and that is why we asked for this Commission.

16694. I am not saying that there is not a very great evil to be remedied. I asked Mr. Pheysey about these experts, whether they could not, as each case arose, get somebody to assist the magistrate. Have you any view on that?—The difficulty is that you may get a different decision in the different parts of the country. You may have one thing "Brandy" in Islington, and something else "Brandy" in Kensington; you may have something else "Brandy" in Manchester, and something else "Brandy" in Liverpool.

16695. When criminal prosecutions take place that occurs in every criminal prosecution?—On questions of fact as to what any article is no one decision of a justice of the peace, or magistrate, or of quarter sessions binds another. We might have to fight this in every county in England.

16696. Do you not see that on that afternoon or morning that at the Local Government Board some gentlemen sat down to define "Brandy," and say what it was, that an enormous number of the trade would go there and ask to be heard, and talk about progress, change, and alteration, and French people would ask to be heard. Would it not add enormously to the responsibility which the Local Government Board has got to bear?—But, on the other hand, is not the responsibility thrown on the country justices?

16697. No, because each case depends on itself, but if there be a general definition that would make it applicable to all?—The only question is whether that is not the line of least resistance.

Adjourned to to-morrow at 12 o'clock.

THIRTY-THIRD DAY,

Tuesday, 23rd March, 1909.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.	G. S. BUCHANAN, Esq., M.D.
W. E. ADENEY, Esq., D.Sc., F.I.C.	J. Y. BUCHANAN, Esq., M.A., F.R.S.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.	A. R. CUSHNY, Esq., M.D., F.R.S.
	A. V. SYMONDS, Esq. (*Secretary*).

MR. ARTHUR MELLOR BRAMALL, re-called.

Mr. A. M. Bramall.

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16698. (*Dr. G. S. Buchanan.*) You were speaking yesterday about certain difficulties that had presented themselves in your experience in the administration and application of the Sale of Food and Drugs Acts?—Yes.

16699. There are one or two further points I should like to put to you in order to get your views on the minutes. One difficulty to which you particularly referred in dealing with misdescription and falsifications under the Sale of Food and Drugs Acts is that the analyst's report is a condition precedent to any action under Section 6 of the Food and Drugs Act of 1875?—Yes.

16700. Then in addition to that you pointed out to us the various ways in which inspectors under the Acts are tied up in the way in which they take samples and take action generally for the purpose of controlling misdescription?—Yes.

16701. I rather gather from you that this might happen, that a man might sell, say, a brandy as Cognac

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brandy in a bottle labelled "Cognac brandy," and you might have evidence that it is not Cognac brandy from the taster, and you might know from its origin, or be able to prove from its origin, that it was not Cognac brandy—in fact the vendor might even own that it was not Cognac brandy—but unless the analyst could say on chemical evidence "This is not Cognac brandy," you would have no case under the Food and Drugs Act?—That is so.

16702. I put an extreme case?—You may put the most extreme case you like and it would be still true that the public authority could not dispense with the analyst.

16703. With a sufficient certificate from the analyst to establish the offence?—Yes, a certificate that on the face of it gave enough information for the magistrate or the justices to say that an offence had been committed.

16704. Then you advocate that the local authorities should have in addition, in order to meet some of these difficulties, the power of applying the Merchandise Marks Acts to food?—That was rather to meet another class of difficulty.

16705. Was it not in part to meet the analytical difficulty?—No, I suggested this, that the analyst's certificate should cease to be a condition precedent, and that we should be able to prosecute under the Sale of Food and Drugs Act without it being a necessary condition that we should get the analyst's certificate. That is to meet the difficulty that there are certain cases in which analysis cannot show that there has been a breach of the Act. For instance, I imagine that Cognac brandy and brandy from the Armagnac district would not show sufficient difference on analysis to enable the analyst to say that one was not the other.

16706. Your suggestion there was that the Food and Drugs Acts should be amended in that respect?—Yes. I should like to say here, if I might, that I think analysis is of the greatest possible use to us. A great majority of cases I suppose in food and drugs can only be really tested by analysis, and we have found the analyst of very great assistance, and we could not do without him, but, as I said yesterday, you could not analyse a Welsh leg of mutton as distinguished from an Australian leg of mutton.

16707. The provision of the Act requiring that the purchaser should receive an article of the nature, substance and quality demanded is at present limited by the purely arbitrary limit as to what the analyst can do under the prescribed procedure of the Act. That is your point?—Yes.

16708. Now with regard to the application of the Merchandise Marks Acts, was it your point that if local authorities could use those powers they could deal with misdescriptions on bottles and packages, and things of that kind, in a way that they cannot do now under the Food and Drugs Act?—Yes, in this way, that whatever the misdescription on the bottle or the package may be if the vendor suspects that the person purchasing is an inspector he may say "Oh, that is not Cognac brandy, that is grain spirit," and although the misdescription is there, because he has given the inspector notice, there is no offence under the Food and Drugs Act.

16709. In the case you mentioned he may actually give the purchaser a bottle with the label "Cognac brandy"?—Yes.

16710. But he says at the same time, "I do not sell you this as Cognac brandy"?—He may say, "This label is untrue," and he escapes.

16711. But if he was dealing with his ordinary customer he would not take the trouble to make that little reservation?—I imagine the label is on the bottle for a specific purpose, and he does not tell the ordinary customer the label is false.

16712. You are not putting a mere fancy case, but that is really a very active difficulty under the Food and Drugs Act in relation to some foods, is it not?—Oh, yes, it is frequently occurring.

16713. It is necessary to arrange that inspectors should send people time after time to a shop to get themselves known as customers before they purchase a sample for analysis?—Yes. You do not send the inspector, you send a man disguised as a working man or a girl disguised as a factory girl, and the first time she goes she is given the genuine article, and perhaps the second, third or fourth time, till they think she is a girl working in the neighbourhood, and then they simply give her something else after that.

16714. You are speaking now of the familiar case of butter and margarine?—Yes, or coffee or sugar—any ordinary article of food that is sold in the small class of shop.

16715. Then there is another point, is there not, that if an article is asked for by a particular name, for example, Cognac brandy, or malt vinegar, or something that is perhaps a little more specific than the ordinary purchaser demands that makes the vendor suspicious?—Oh, yes, and if you ask for a larger quantity, that is the quantity you require for analysis but larger than is usually bought in the neighbourhood, that makes him suspicious.

16716. Here again a man may have a cask labelled "Best malt vinegar" on his counter, but if you go in and rather obviously ask for "malt vinegar," and ask for a lot of it, he will say, "This is not sold as malt vinegar?"—Yes, he says. "It is wood vinegar," or something of that sort. If it is a neighbourhood where people usually buy pennyworths, and that is insufficient for an analysis of a third part, and you ask for sixpennyworth they are on their guard directly.

16717. To go back to the Merchandise Marks Acts, I think your point was if local authorities had the power to apply these Acts they would be able to deal with misdescriptions, say, on the labels, or on the casks, apart from the question of exactly how the particular purchase was made?—You need not make a purchase at all. It is an offence to have it on the premises for the purpose of sale, and if there are exposed for sale on a shelf or in the window any goods on which there is a false trade description, that is an offence without any sale being necessary.

16718. A false trade description would include the invoice, would it not?—Yes. There is only one case on that. It has been held that where an invoice is delivered at or about the same time as the goods that the invoice is sufficiently identified with the goods to be a false trade description. The particular case in which that was held was the case of delivery of beer; the invoice came by post about the same time as the dray arrived at the consumers, and that was held to be sufficient. It has never gone beyond the same day, but I think in principle if it came the day before or the day after that would probably be sufficient.

16719. There have been some extensions of the original Merchandise Marks Act of 1887, have there not, empowering the Board of Trade and the Board of Agriculture to take action in specific cases?—Yes, I think that is so. I am not familiar with it, however.

16720. The Board of Agriculture has, as a matter of fact, taken some action in regard to food misdescription—such as the description of foreign hams as York hams?—I think so, but I have no personal knowledge of it.

16721. Do you think it desirable that the action of local authorities under the Merchandise Marks Act, if they had the power, should be subject to any central control or regulation?—I hardly know. I have not considered that. I think a good deal would depend to whom the central control was given.

16722. You were mentioning yesterday, in the case of the Food and Drugs Act, the difficulty which arose from the fact that samples were dealt with to a different extent and by different standards in different administrative districts and before different magistrates?—Yes.

16723. Would you not incur the same risk or even, perhaps, a greater risk if you had the uncontrolled use of the Merchandise Marks Acts by local authorities?—Of course, you would have the same difficulty. One constantly has. The same thing occurs in nearly every case I have under the Merchandise Marks Act. It is said, "Oh, yes, of course—that at one time meant a specific article, but now it means something totally different." If I may give you a concrete case, I had a case relating to Berncasteler Doctor wine. Berncastel is a town on the Moselle, and the "Doctor" vineyard is a particular vineyard in the district of Berncastel, so that that label suggested to the ordinary man that it was one not only from Berncastel but from a particular vineyard in Berncastel. It turned

out it was neither from the one nor the other, and the defence was, "Oh, but whatever Berncasteler Doctor originally meant, it has ceased to mean that, and it now means any wine of that type, or, at any rate, any wine from any part of the Moselle." That is a totally different thing from what the words imply. We won that case.

16724. That case was for a private firm?—It was for an association.

16725. My point was rather this, that the objection of the trader to regulations and matters of that kind is so very often less to the imposition of restrictions than to unequal action. The trader says (because I have known it in some parallel cases) "We want to know what we are to do, and we want to know that it will be equal for everybody." That, of course, you recognised when you were talking to us about the Food and Drugs Act?—Yes, it seems to be absolutely reasonable. It is unfair that there should be one law in Islington and another law in St. Pancras and another law in Yorkshire—or I should say, perhaps, another application of the law.

16726. You were speaking of official definitions of foods, such as form the basis of some of the newer food laws abroad—in America and in some of our Colonies and in France. I think you regarded those as important?—Certainly.

16727. And largely with the object with which we have been speaking as tending to secure uniformity—letting people know where they are?—Yes, and laying down a general definition of important items of food for the whole country.

16728. As to the extent to which that process should go, it was pointed out to you by the Chairman what serious interference might take place with trade and so forth if any authority were to rush into a series of definitions for a large number of foods. You agree that that would be a serious matter?—Oh, yes. I did not mean to suggest that the authority should commence definitions of food without the occasion having arisen to require it. I meant there should be an authority when the question was seriously challenged as to what was meant by a particular term for food and that that should be settled not by two justices in the country, whose decision is not binding on anybody else, but by some central authority which was specially qualified to deal with it.

16729. Your contention would be, therefore, would it not, that all these definitions should be made after full enquiry, in which the trade side of the case was heard and trade practices were ascertained?—Yes, and I hope, too, the public side of the question. I would not let the trade make its own definitions.

16730. You would not let the trade make its own definitions, but you would realise, perhaps, that in certain cases a great deal of advantage could be had by the co-operation of the trade?—Yes, you could not enforce the definitions without hearing the trade. I do not think it could be suggested that they should not be heard.

16731. Taking the Sale of Food and Drugs Acts as they stand, there are already in a few instances definitions of food or what practically amount to official definitions, are there not?—Yes, under the Act of 1899 I think there are. There are other chemical standards, are there not?

16732. I am thinking of the butter legislation and the extension of the Food and Drugs Acts by the Butter Act of 1907, which gives definitions of butter, of margarine, and of milk blended butter?—Yes, that arose from the habit, I think, of intentionally leaving a large quantity of water in the butter. It was found that water was even being forced into the butter in order to increase its weight. Water is cheap, and they put water into the butter and said it improved it, I think.

16733. But, apart from water, there is a general definition of butter, margarine, and milk blended butter?—Yes, I think steps in the right direction have been taken by these definitions and by fixing an analytical standard when it became necessary.

16734. In the case of the Butter Act, these definitions were accompanied by some additional provision for inspection and control at the source, that is to say, at the place of origin?—That is so.

16735. Supplementary or complementary to the ordinary analytical procedure under the Food and Drugs Act?—Yes.

16736. The Local Government Board have no powers in the matter of fixing standards with regard to these food descriptions?—No, I think none.

16737. They have in one or two recent cases made recommendations with a view of securing uniformity and getting rid of some of the difficulties you mentioned?—They have been made to the analysts, I think. I have not seen them.

16738. By the issue of reports?—You are referring to the vinegar report, I think.

16739. Yes. I will take that as an example?—Yes, that has been a very valuable report. I have had two or three cases with regard to vinegar under it since.

16740. In that case my colleague, Dr. Hamill, who made that inquiry did not make his recommendations simply as the result of sitting in an arm-chair, as you will probably realise from reading the report?—Oh no; I know he went round several vinegar distilleries all over the country.

16741. It was a very considerable inquiry?—Yes.

16742. In the case of that vinegar report have those recommendations or has the report itself been utilised in the cases you have had?—Yes. First of all, I have utilised it myself, and found it very instructive, but then, of course, it is not evidence, and the extent to which I have got it in depends a good deal upon the magistrate. I go on till I am stopped. I can get it in in the opening. I can say "This is based on a most interesting report of the Local Government Board," and I can read part of the report as my opening, but I cannot make it evidence.

16743. (*Chairman.*) You have no counsel opposed to you to object?—Sometimes. But counsel cannot prevent my using the report as part of my opening address, and saying "This is put in better words than I can put it myself," and I put it in that way. But in most cases I have had one of the genuine vinegar manufacturers there to give evidence in support of the report.

16744. It is used as a matter of guidance, but it is not evidence?—It is not evidence, of course.

16745. (*Dr. G. S. Buchanan.*) The report was not issued with the object of being put in as evidence in these prosecutions, but to give information to the authorities concerned in administering the Act as to what the actual position is as regards adulteration and misdescription of vinegar, and how far local authorities could take action in order to stop it, consistently with the Food and Drugs Act?—I think also it has been useful, and I think it has brought home probably (not the report itself, but by newspaper extracts and references to it) to the shopkeeper the difference between one class of vinegar and the other, because when malt vinegar has been asked for and the shopkeeper has found out it is an inspector who is asking for it he has said "That is wood vinegar," so he has known the difference between the wood vinegar and the malt vinegar. Perhaps the Commission may not all know, but this—I was going to call it spurious vinegar, but I do not wish to use any hard terms, and I will call it this artificial vinegar, is made from acetic acid only and water, and the acetic acid is made from wood.

16746. As we have been referring to this report I may say that one effect of it has been so far as we have ascertained that the traders principally concerned have expressed by resolutions and otherwise of their associations their concurrence in the views and recommendations of the report?—I did not know that, but I have no doubt it is so.

16747. As being helpful to satisfactory trading?—I should think it must be, very.

16748. Do you think that official definitions such as you have had in mind would in many cases be welcomed by the traders concerned?—By a certain very large section of the trade it would be most thoroughly welcomed.

16749. Take the brandy case for example. Assume that prosecutions had gone on freely under the Sale of Food and Drugs Acts, on the lines that were taken up in Islington, in some parts of the country, but had not been taken up in other parts of the country, or that there have been conflicting decisions. If you assume that would it not be to the interest of the trader

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to know definitely for the whole country whether he should call a mixture of grain brandy and grape brandy, brandy, or whether he ought to call it grain brandy, or whether he ought to call it British brandy?—Any uncertainty is exceedingly prejudicial to the trade. They do not know what to do. They are afraid to buy their stocks, because they are not sure what it ought to be called. They say that while this Commission has been sitting they have been living from hand to mouth afraid to get in any large stock. I think the great majority of traders are only too anxious to have something definite by which they can guide themselves.

16750. Do you regard it as essential to any machinery which would provide these definitions that it should be more or less elastic and capable of revision when new considerations arose?—I think the law of the Medes and Persians has always been a failure. It does not work. A definition of what is meant by brandy, for instance, as a fact ought not to change very materially, but if the definition includes process then certainly it ought to be elastic, because process and invention are always changing. But I do not think if brandy is now derived from the grape that 10 years hence it could be derived from anything else. It is a fact, I take it, and the fact cannot change.

16751. There are just one or two points in your *précis* that I wish to get out. In the particular case of Hillyer that you told us about the brandy was obtained from Messrs. T. M. and Co. in November, 1903, and that firm had purchased an octave of brandy at 7s. 6d. a gallon, and another at 3s. 6d. a gallon, in addition to which they had paid 11s. 4d. for duty and ¼ per cent. for charges in bond?—I think that is a mistake. I think that is what Mr. Hillyer paid. As I told Lord James yesterday I never knew what the wholesale merchants were paid. They would not say except privately.

16752. What were the prices which Mr. Hillyer paid for this?—He paid the merchant 7s. 6d. a gallon for one octave and 3s. 6d. for the other, and then he paid the duty in addition, and then mixed the two octaves together.

16753. He mixed the two octaves together and watered down by adding 42 per cent. of water?—Yes.

16754. And then bottled the mixture?—Yes.

16755. And described it as "Fine old pale brandy"?—Yes.

16756. From the evidence of Mr. M. the one octave was obtained from a firm in the Cognac district?—Yes.

16757. And the other was obtained from another Cognac firm?—Yes, they both came from Cognac.

16758. But Mr. M. said that both of these octaves contained grain spirit?—He admitted that under pressure. He did not wish to do that.

16759. One contained more grain spirit than the other?—Yes, so he said. That is, the cheaper one contained more than the dearer one.

16760. Presumably, he would have had no doubt about the nature of the spirit when he bought it?—No. I understood that he tasted the sample and he spoke in the witness box of what his recollection of the sample was. He was in a very difficult position.

16761. Was the defendant a publican or a wine merchant?—The defendant kept an off-license wine and spirit shop.

16762. The mixing was done out of bond, of course, in that case?—Yes, done on his premises, I think; and I take it it would be allowed in bond, because they were both entered as brandy from Cognac. I suppose these might have been mixed in bond.

16763. Did you ascertain how these octaves were invoiced to Mr. Hillyer?—I do not think I saw them, because the invoice had the price on them, and he was very unwilling for me to see the price or for the price to be mentioned. Mr. Fordham saw them.

16764. The question whether they were invoiced as brandy did not come up?—I cannot recollect. There is nothing on the shorthand notes to show that.

16765. So in this particular case you cannot say whether the retailer had the brandy accurately described to him or not when he got it?—No. I think probably he had not—that is to say, not accurately. Probably it was called brandy to him. I think that he said he did not know. I do not think he did know what it was.

16766. You said that if you had described correctly to the retailer, if you had had a machinery to secure that the retailer should be correctly informed as to what he was getting, you have still done very little to protect the consumer?—I did not say that.

16767. It has been said, and I want to hear your views upon that?—I think you are doing a good deal. I think in the majority of cases the retailer is quite unaware of what the spirit or the substance is that is sold to him. It is sold to him under a specific name and he thinks it really is that, and if you bring home to the retailer definite knowledge of what the substance is, or what the spirit is, that he is receiving from the merchant, you have got three-quarters of the way to protect the consumer. One must assume, and I have most absolutely assumed, that the great majority of retailers are honest men. They do not wish to defraud their customers.

16768. In the case of the publican, if he has his spirits accurately described to him you mentioned that he would be liable to rather serious consequences if he was found to have misdescribed them in selling them over the counter?—If he was convicted of an offence under either of the Acts it would be almost, I believe, certainly reported to the next meeting of the licensing justices, and I believe notice of opposition to his licence is given by the police as a matter of course if there is a conviction.

16769. That is what I want to get at. The ordinary offences now under the Food and Drugs Act are that a publican is liable to be convicted for selling spirits that are watered?—Yes.

16770. Is that liable to be reported?—I believe so. The report does not go through me, but I frequently have heard most earnest appeals made to the magistrates not to convict because it will endanger the man's licence and involve a more serious penalty upon him far greater than, of course, falls on an ordinary trader, and I have been at licensing meetings and heard the inspector of police report that there has been such and such a conviction. If it is a conviction not involving much moral guilt the man does not lose his licence, but he is cautioned, and if it occurs again his licence would be in jeopardy and publicans are most anxious that there should be nothing against them.

16771. At present the misdescription, as you would regard it, in the case of these spirits, often is not primarily made by the publican, but by the man just behind the publican—the man who supplies him?—I hardly like to apportion the blame, but I am certain in many cases it is not the publican. He does not know.

16772. (*Dr. Adeney.*) There are two or three questions I should like to ask. With reference to one that Dr. Buchanan asked, I should like to press a little further as to the desirability of elasticity in the standard. Have you seen the report that has been issued by the Department of Public Health for Victoria?—No, I have not.

16773. It is most interesting reading. The Department of Public Health have in charge the administration of the Pure Food Law of the Colony of 1905, and amongst other things in this report they draw attention to the fact that in 1907 they reviewed the standard for milk?—That would be the analytical standard?

16774. That would be the analytical standard?—I think that must be reviewed from time to time, because that depends on the progess of science.

16775. And the capability of trade or the possibility of the first standard being too low?—Quite. But there again it is not the definition of fact. Everybody admits that milk is a certain liquid that comes from the cow, and what they are defining there, or what they are trying to define is how the analytical standard can be adjusted to meet the real fact, that is the milk from the cow, and as improved methods of analysis are discovered then I think there must be room for alteration of the definition.

16776. Of course the analysis of the milk fat as milk is quite an easy operation. It is not a question of improved methods of analysis but actually raising the standard?—Of course I am speaking of a matter

of which I am quite ignorant, but there might be some other method of ascertaining whether the milk was genuine, than merely taking the butter fat. For instance, the analysis detects the addition of water not by the butter fat but by the non-fatty solids, which are constant. You can always find, I believe, the addition of water while it is most difficult to say whether there has been abstraction of fat. It may be within the possibility of science that some method might be found as accurate for testing the removal of fat as the present test for the addition of water.

16777. Which is a reason for elasticity?—Yes, it would be absurd to shut out improved methods.

16778. Leaving it open to revision?—Yes.

16779. Another thing this Food Law Committee have determined is that the standard for milk fat originally laid down at 3·3 was too low. They have increased it to 3·5, and given notice of the possibility of further alteration to the trade?—I wish we could have 3·5 here.

16780. As to the difficulty of framing definitions, that arises, does it not, because there is no guiding principle on which you could draw up definitions for different articles of food and commerce. For instance, the illustration you gave yesterday of leather. Chemical analysis would not afford the best help possible in deciding a question as to whether it was a mixture of leather and brown paper?—I do not know. It might not. I do not know what analysis is capable of, but I should have thought it would enable us to distinguish between leather and brown paper.

16781. Ultimate chemical analysis would not, but microscopic analysis might of course?—It is quite possible it might not.

16782. But all I am anxious to get at is the difficulty in framing definitions for different articles of food and commerce. The basis on which these definitions depend must really vary with every article considered?—I think one has to look at the definition in a double light. First there is the definition of a fact that leather is a substance prepared from the skins of animals, and then there is the further—not definition exactly, but the equivalent in chemical analysis of how that skin, whether it is the skin of an animal or not, can be tested by analysis. That is a very different thing from a definition. For instance, with brandy you might say the definition is a spirit distilled from grapes in a pot still. How you are going to find that out analytically is another thing.

16783. I want to come to that, but as you have mentioned that I might carry it further. Do you know what the French Food Law Committee have done with regard to a standard for French brandy?—No.

16784. Have they done anything, do you know?—I am afraid I could not say.

16785. They have restricted the use of the word "Cognac"?—Yes, I know that. That is the geographical restriction. I know that of course, but that is not brandy pure and simple.

16786. Do you know what kind of evidence they rely upon in cases of falsification and misdescription in the case of Cognac brandy?—I cannot tell you except what I have heard here. I have no knowledge beyond that.

16787. They have not at present arrived at a definite chemical standard?—I think not; I do not know.

16788. But they do use chemical analysis, and in addition expert tasting?—So I understand.

16789. And the official Excise records?—I wish I knew. If I had known you wished to have that information I could have got information from France. But I cannot say. I have no doubt it is so, but you must not take it from me.

16790. We should find that every article of food, or every article of commerce, so far as definition and any controlling standard is concerned, would have to be separately considered?—Certainly.

16791. Therefore it is a matter that is absolutely necessary should be referred to some competent authority specially created for the purpose?—Undoubtedly, and there is this to remember, that in the case of brandy there has been an attempt to defeat the skill of the analyst by manufacturing artificial ethers and putting them in. But probably analysts would succeed in finding some other test which could not be defeated. That is not an isolated case. Dr. Teed will tell you how often analysts have to change their methods in order to meet the artificial means which certain classes of traders take in order to answer the then analytical test. The method of analysis is altered to defeat the fraudulent attempt to disguise the real condition of the thing.

16792. You would agree with me that chemical analysis unaided would not easily succeed in distinguishing the difference between a 2d. British hand-made cigar and a 2s. Havana cigar?—I do not know that.

16793. I think you may take it from me it would not?—If you say so I accept it, but I have great faith in analysts.

16794. Other evidence would have to be sought for to distinguish two products of that kind?—It might be. I do not know what the 2d. British cigar would be made from.

16795. Chemical analysis might possibly be of assistance there?—Yes. I was thinking of putting as an example here that you could not test the difference between China tea and Indian tea by analysis, but I looked that up and found that you could.

16796. Yes, I rather think you could?—I found my example had gone because analysts could tell the difference.

16797. I am not quite sure that it is advisable to suggest that analysis could not detect the difference between the British cigar and the expensive Havana without emphasising the reservation unaided?—I think very likely it could, but it is possible it could not.

16798. There would still be the possibility of bringing in subsidiary evidence?—I think if I may say so, it is absurd to shut out any class of evidence which helps you to arrive at the truth.

16799. That is what we want to get at?—Yes, I feel most strongly on that. The point is, there may be one particular test which might be inappropriate to the subject matter; you must test it, if you want to get at the truth, by every avenue that you can get. It would be silly to rely on tasting alone.

16800. Authoritative machinery does not at present exist in this country for that purpose?—No, none.

16801. Did I gather from you that you looked forward to the Excise authorities assisting in protecting misdescription of brandy in the retail trade?—I have a pious hope. I hope it may be realised, and very earnestly hope that it may be realised.

16802. Do you think they could as effectively control the retail trade as a new authority such as you have been referring to?—My feeling is this. I do not want to use a harsh word, but where wrong-doing goes on before the eyes of the Excise officers they absolutely know it, and in many cases resent it as honest men, and I say that there ought to be power for the Excise authorities to stop it.

16803. Of course, if wrong-doing went on under their own eyes, it should be?—It is allowed now. It is not interfered with.

16804. (*Mr. Guillemard.*) Proved cases are allowed?—I think so.

16805. It all rests on the word "proved." I only commend your attention to that one point. "Suspected" is one thing, "proved" is another?—I do not shrink from the word "proved."

16806. I was wanting to hear how far you wanted to go?—These things come to one in confidence, and I am very reluctant to mention them.

16807. We look for proof, and it is difficult to get?—May I state a positive case?

16808. I should like to hear it—a known case. Do not mention the name of the person, but give me a case you know to exist?—But you may identify it.

16809. I think you may take it that anything that is given in evidence before this Commission would not be dealt with in that way?—I am under a promise and I must respect it.

16810. (*Chairman.*) Perhaps you will take time to think it over?—I will put a supposititious case, very parallel to the one I know of.

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16811. Perhaps if Mr. Guillemard will continue his questions later he will have time to think of his question, and you will have time to think of your answer?—I have not the least difficulty in answering, but I must respect confidence.

16812. (*Dr. Adeney.*) I did not intend to lead you into that direction. What I did intend to lead you to was this, that whatever the Excise authorities could do they are restricted to their own area as it were, that is to say, to spirits in bond?—The moment it goes out of bond the Excise have lost their control.

16813. Then comes in the necessity for some auxiliary assistance to protect the consumer from fraud and to assist the honest manufacturer?—Yes.

16814. And this new authority that you have been referring to would fill that gap in our machinery?—Not in the way I have been referring to it. I have been referring to it as an authority to fix definitions and, as far as possible, analytical standards.

16815. A combination of manufacturers could protect themselves if the definition of their product was definitely settled by a competent authority?—Certainly. My feeling is that if this Commission and other Commissions and other authorities can settle general definitions, I think we, the local authorities, can take care of the rest.

16816. If the definitions were formed?—Yes, satisfactorily formed.

16817. That could only be vested in special authority?—Clearly. May I be allowed to say, before concluding my evidence, that Dr. Schidrowitz referred to M. Girard, who wrote the Manual on the analysis of French wines, and I rather gathered, reading from the shorthand notes, that he suggested that there were only 25 instances of analyses of Cognac in the book and that therefore it was not sufficiently general to form an opinion. I communicated with M. Girard, and I had a letter from him yesterday morning. He says he has done 20,000 analyses and those in his book were only samples—"an infinitesimal portion" are the words he used—of what he has done. He is a man of the widest experience, and he is doing it every day. His knowledge of the analysis of brandy is, I suppose, perfectly unique. His own figure is 20,000.

16818. I think in fairness to Dr. Schidrowitz I ought to say this, that he had in his mind when he was referring to those particular samples the question of the possibility or the advisability of fixing a chemical standard. Then, his point was this: In doing so the history of the samples which were analysed for the purpose of that standard must be known beyond all doubt and their source must be accurately known. What he feared was this, that although a very large number of analyses of spirits have been made, very little real knowledge exists as to the origin of those samples of spirits?—I am afraid he mentions the word "analysis."

16819. In questions of fixing standards it ought not to apply; that was Dr. Schidrowitz's point?—Quite so, but it rather read as if he thought there had not been a sufficiently wide number of samples taken to enable you to form a deduction from it.

16820. As to a chemical standard?—He suggested there had been generalisation from insufficient particulars. If there were 20,000 analyses I should have thought that was a fair number.

16821. If we knew the origin of the samples?—I wish you could get M. Girard here.

16822. (*Mr. Guillemard.*) I wish you would elaborate a little what you began to say to Dr. Adeney, because the point I want to direct your attention to in what you are going to say is the great difference from the point of view of my department that obtains between the demonstration of proof and suspicion. If you would bear that in mind in anything you have to say it would simplify the discussion. The action of the department must rest on proof. That is the first point?—Absolutely.

16823. I shall be very glad to hear anything you have to say on that?—I must put a supposititious example, because I must not be a party to identifying any person or any firm or any Excise officer.

16824. I quite see your difficulty as well as mine?—Assume that from Glasgow a considerable quantity of grain spirit, patent still, or more or less silent spirit, came over into the Excise warehouse in Dublin, and that half of that is poured into one set of casks and labelled "Irish Whiskey" and the other half of exactly the same spirit is poured into another set of casks and labelled "Scotch Whiskey" and sent out either to England or the Colonies. That is done under the eyes of the Excise officer and he knows there is a misdescription.

16825. Assuming that did happen, what is the definition of "Irish whiskey" or "Scotch whiskey" at this moment? We are in the position which Dr. Adeney described. If this Commission gives a definition of "Scotch whiskey" or "Irish whiskey" it would be a very different position, but at the present time there is no definition of Scotch or Irish whiskey, is there?—No.

16826. You see the difficulty of a department that stands to be shot at if it does anything arbitrary?—I quite appreciate that. Until the evidence was given in the whiskey case and was given here, the plain man thought that the same thing could not be both Irish and Scotch whiskey at the same time, but apparently it can.

16827. This is not a point of logic. I am asking you to consider the matter practically. I am not saying the case occurs, but assume it occurs for the purpose of argument. I think it occurs possibly occasionally but very rarely. Which of those two names is to be prohibited—both? And on what ground?—I should think both, on the ground that what could be either could not be both, and could not be "either" either.

16828. (*Chairman.*) It must be something?—But not necessarily Scotch or Irish whiskey.

16829. What is it?—It is patent still grain spirit.

16830. Made in Glasgow and sent to Dublin?—It is patent still grain spirit, and it is neither Scotch nor Irish whiskey I should say.

16831. (*Mr. Guillemard.*) A department cannot act solely on the opinion of even so admitted an expert as Mr. Bramall?—I hope they would not attempt it.

16832. It is only your opinion?—I think, until the evidence was given that by the wave of the magician's wand it might be one or the other as the merchant likes, everyone thought that Scotch whiskey was made in Scotland and Irish whiskey in Ireland.

16833. Oh no, pardon me. A great body of opinion holds that it is a generic term and not a geographical term. I am not saying it is right?—With great respect I say that is absolutely wrong.

16834. But it is very largely held by people of considerable intelligence. I do not say from what motive, but it is held?—Outside the trade?

16835. I gather so?—I should doubt it.

16836. Do you know the parallel case of Irish roll tobacco? Have you any experience of that?—None at all.

16837. By your analogy that would naturally mean roll tobacco made in Ireland?—That would be the ordinary meaning of the words.

16838. I believe the judicial interpretation conflicts with that view and gives it a generic meaning. I only put it to you as an instance of the difficulty of these things?—One knows that sometimes they become generic, and properly so. On the other hand I feel in a very humble way in our own district I am a kind of protector of the public interests, and if all these terms are to become generic they will mean anything or nothing. The distinction that I always try to draw is this, that if it is simply the method of manufacture, that can be as easily done in London or Dublin as in Glasgow, then it will becomes generic. But where the name indicates something connected with the place of origin which you cannot get elsewhere, for instance, you cannot get the soil of Cognac in Ireland, or in Scotland or in London, or in Egypt, then it cannot become generic and must be geographical.

16839. I quite agree there is a great deal to be said for your view, and it may become the view of the Commission or the law of the land later?—I hope so.

16840. But till it so becomes, there is not enough for my department to act upon. That is the point I put to you. There is no answer to that, is there?—I

admit as a general principle that as a matter of opinion and not of proof of course neither a department nor an individual can act upon it. You might detain it. You do detain goods on suspicion, do not you, sometimes?

16841. That is a different ground you are on now. That is getting into the Merchandise Marks Act, but you were on the Revenue point of view where the Merchandise Marks Act does not come in?—I am speaking of it rather in this way—I am sorry to go back to the old example—but I do not think as a matter of common sense and of common honesty that something coming from Glasgow can simply at the wish of the merchant or the blender, whatever the name may be, be in one cask Irish whiskey, and in the other cask Scotch whiskey, even if you admit it has ceased to be a geographical name.

16842. I quite see the logical difficulty?—Those are two things the genus of which is different; one spirit cannot be both unless you say that Scotch and Irish whiskey are mere terms, that they have ceased to have any meaning at all, and I am not sure that some people have not said that. A gentleman from Belfast said it might be anything.

16843. (*Chairman.*) Might be everything?—Yes.

16844. (*Mr. Guillemard.*) It really comes to what Dr. Adeney brought out, that if this Commission is able to lay down definitions of Scotch whiskey and Irish whiskey, it is perfectly clear that my department would be in a much stronger position for dealing with this difficulty?—Absolutely.

16845. But meantime there is a conflict of opinion, and there is no binding law or authority on the subject. That is the position which I must ask you to bear in mind, however much it differs from your personal opinion, that my department is not able to say that such and such a thing is or is not Scotch whiskey. That is partly what this Commission is here for?—Except that we did not shrink from taking proceedings ourselves.

16846. It may be that you have greater freedom than the department I have the honour to be connected with?—I do not think there is any difference between us in principle.

16847. I do not think there is any?—I have understood—it may be quite right, but I hope it is wrong—that the Excise authorities—not yourself——

16848. We cannot be separated. I am here for them?—But I wished you to understand there was nothing personal in what I was about to say.

16849. I am here to speak for that department?—I may be quite wrong, and I hope I am, but I have heard and seen it in print, too——

16850. Oh! yes?—But not in newspapers only—that the Excise authorities have said: "Our duty is the collection of revenue, and we have nothing to do with what does not interfere with the collection of revenue."

16851. I put this to you as a case that occurs. A person labels a certain thing as whiskey 12 years old. If the Excise officer knows that that whiskey is not 12 years old and reports the matter to the board, the board tell the people that they must not call it that?—I am very glad to hear it.

16852. Had you not heard of that before?—I had not.

16853. That happens, and possibly the instance you have quoted may happen?—It did happen. I have disguised the places.

16854. You have had to put it as a supposititious case, so we may take it as that. I understand you to say it has happened, but you have put it as an imaginary case?—I have seen the Custom House officer who saw it done.

16855. The suggestion I wanted to combat, and which is of course the line that is very commonly taken in writing, was that the Excise regard the thing from a lower point of morality than other people?—I would not dream of putting it in that way, but it is rather that the Excise think their duties are confined, as, of course, they are principally, to the collection of revenue, and it is not their duty to go outside their primary duty.

16856. There will be more evidence given on that point, but in the meantime the important point is to bear in mind the great difference between proof of a particular instance and general talk. There is a great deal of general talk, but I have seen very few cases of proved fraud that are submitted to the revenue boards—very few cases?—I have heard a great deal of general talk, and when I have tried to substantiate it I have found that it did not bear investigation, but this particular case that I am speaking of did bear investigation.

16857. With regard to that particular case I think you see there is, apart from the logical absurdity, which I admit you have brought out, a practical difficulty in dealing with it. I think you will admit that?—Yes.

16858. If you were in the position of the head of a department you would find it very difficult to say "that is not Scotch whiskey" with regard to one thing, or "that is not Irish whiskey" of another, and that is the ground on which you would be challenged?—But it might be said: "You shall not in future out of one cask make two substances. You shall not do it. If it comes in labelled Scotch grain spirit you shall not wave a magician's wand and send it out as Irish whiskey or Scotch whiskey, the same thing." That must be wrong.

16859. (*Dr. Adeney.*) In this supposititious case does it occur that half of the spirit is flavoured as against the other half?—I should imagine they were both artificially flavoured.

16860. (*Mr. Guillemard.*) As to your particular instance too much may easily be made of it. I am not denying that the thing may conceivably happen, but it must happen very rarely indeed. That is my experience—I am sometimes inclined to think that when you succeed in authenticating one case that it is not the only one. It is most difficult to get proof of this.

16861. Of course it is. You see our difficulty for us as a department?—Yes.

16862. Of course, a department always stands to be shot at by vague talk?—I dare say, because the department stands so high that the public expects a great deal from it.

16863. But the public does not always say it in quite such conciliatory words as you have just used. The departments are trying to do their best in the matter, only it is not an easy position. You may meet Excise officers who will tell you the position is quite simple—the individual Excise officer. The individual Excise officer is not as a rule familiar with the difficulties of central administration. I put that to you as a thing to bear in mind?—I quite agree.

16864. (*Chairman.*) One question as to the Glasgow case you have mentioned. The spirit you mentioned was sent off from Glasgow and arrived in Dublin?—I am putting a supposititious case.

16865. Yes, I am taking the hypothesis. That is a private transaction between two dealers. Some day or other the Excise officer goes into the Dublin merchant's premises and he sees this spirit from Glasgow?—That is not quite the point. It goes into a bonded warehouse, where the Excise officer is, I believe, always present.

16866. You are only speaking now of what occurs while the article is in bond?—Yes.

16867. So if the merchant takes it out of bond and divides it into two casks the Excise officer cannot interfere with it?—No, he cannot.

16868. So if a man does so dishonest an act out of bond he escapes, but you will not let him off the penalty of committing the dishonest act in bond?—Exactly. It is really parallel to the case of a policeman seeing a burglar and he arrests him, and yet here is a burglary that the policeman in the shape of the Excise man cannot see.

16869. Your analogy is not quite right. If there be a burglary outside he is going on committing the burglary, according to you, out of bond if he uses these two casks?—Yes, but the policeman is not there to see him. But the policeman is in the bond to see him.

16870. The burglar is certain to go to the place where there is no policeman?—He does not always do it.

16871. He can pick them out if he likes. In this case he could pick a place out in a moment?—I quite agree, but I do not think that is a reason why a Government official should see what *ex hypothesi* is a fraud being committed before his eyes and take no action. May I put it further than that? Take the case (Mr. Guillemard will correct me if I am wrong) of export to America or to the Colonies. I am under

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the impression that the spirit never leaves bond at all, because if it did duty would have to be paid. I think there is no duty on spirits exported. They put it into bond and it leaves the bond and goes straight on to the ship. If you stop this illegal mixing in the bond, either in Scotland or Ireland, or wherever it may be, the ship takes the certificate, I believe, from the bonded warehouse here and that is delivered to the Customs authorities at the American port, and unless you are going to assume that some mixing is going to be done in the hold of the ship you have, so far as America and the Colonies are concerned, an absolute plan to prevent it, while it is possible, at any rate now, that this mixing may go on in the English bond; labels, which I venture to think are misdescriptions, are put on the casks in the presence of the Excise officer, and the American public who know of them as coming out of the English bond may naturally assume that nothing dishonest would be allowed inside, and it would be a great pity if it is possible to stop it that it should not be stopped.

16872. What do you suggest the Excise officer should do? Would it be the subject of a prosecution?—Yes. I think they should report it, and that prosecution should follow, or it should be prohibited. For instance, Mr. Guillemard told us yesterday that because there is a difference in duty of a penny a gallon between grain spirit and wine spirit you are not allowed to mix them because that makes a difficulty about the duty. I understood him to say that. If it is worth while to prohibit it for the sake of a penny a gallon duty it is still more worth while to prohibit the spread of anything approaching dishonesty in our exports abroad, which is greatly resented in America and the Colonies. I hope I have made myself clear.

16873. Yes, you have expressed it very clearly. I want to put to you in conclusion one comprehensive question. You have had charge of these proceedings and taken great interest in the matter. If there is anything you would wish to add, within fair limits, to the evidence you have given we shall be glad to hear it?—I am much obliged to your Lordship. I hope you will stop me if I begin to transgress the fair limits you have mentioned. You asked me questions yesterday about what the wholesale people said as to the amount of grain spirit that is put into brandy, and I would like to read a few answers that were given in the course of the evidence in the Hillyer prosecution to show the position that was taken up. This gentleman from whose evidence I should like to read an extract is one of the largest distributors in the country, a man whose name is a household word, and everybody in this room would know it I am sure.

16874. What are you reading it from?—From the shorthand notes of the trial before Mr. Fordham. This gentleman was asked by the counsel for the defence: "Now you are here, I would ask you what is your view about brandy being regarded as the last witness regarded it. In your view in the trade must it be derived wholly from the grape?—I should say not. It has never been the custom ever since I have been in the trade to regard it as such." That was his evidence-in-chief.

16875. Was this gentleman an English merchant?—The distributor.

16876. An Englishman?—Yes, in London. I do not know why I should not mention his name—it is Mr. McKechnie. He is a man absolutely well known, and quite at the top of the trade. Then his cross-examination came, and I asked him: "Mr. McKechnie, do you say that a mixture of grain spirit and Cognac is brandy?—It has always been known as such. Potato spirit and brandy?—I do not know potato spirit. Would you say so?—I say nothing. Beetroot spirit?—Yes." That is, that a mixture of beetroot spirit with Cognac is brandy. Then the magistrate says: "Anything?—Spirit from anything. (*Mr. Bramall.*) Sawdust?—I never heard of sawdust spirit. That is the universal opinion in the trade?—I know some think one thing and others think another. Then may I say without disrespect men as eminent as yourself think to the contrary?—Well, I do not know that I consider myself eminent. (*Magistrate.*) You could not find one more eminent than yourself?—I am only giving my evidence. (*Mr. Bramall.*) I would like to know how large a proportion of potato or beet spirit you would put in brandy and still call it brandy?—I cannot tell you. Give me the maximum?—I could not. Oh, please?—I could not. How high would you go yourself and still call it brandy?—In the course of my commercial experience I have bought brandy always from Cognac. I have never considered what it was made from. It is dangerous to consider that. Would you say that three-fourths of grain spirit and one-fourth of Cognac was brandy?—Three-fourths grain spirit. Yes?—It has brandy characteristics. Would it be brandy?—I believe it has been sold as brandy. (*Magistrate.*) Do you call it brandy? Supposing you knew that there was three-fourths grain spirit, or potato spirit, and one-fourth Cognac, would it be brandy?—There are some people who require a low standard article at a low price, while others require a good article for which they will pay a good price. (*Mr. Bramall.*) But is it brandy?—I think it is. Would you go as far as seven-eighths." Then he began to talk about the dictionary. He rather jibbed at seven-eighths. This gentleman said that you might put three-fourths of grain spirit into brandy, and that was the custom of many in the trade—not small people but very large wholesale people. Then the only other thing I wanted to add was this, that one has a feeling that the public need protection, that is to say, the consumers, and that there is no combination among the consumers. It is impossible that one individual consumer could face what he generally would find if he made a fresh departure, as we made in the brandy and whiskey cases, and several other cases. He is faced by a trade combination of a very large character and with a very large amount of money behind them. The consumers dare not do it. They have not the time, they run pecuniary risks, and unless the public authorities are able to protect the consumers I do not think the consumers are able to protect themselves. One feels this and feels it strongly—almost, I may say, personally strongly. It is so largely a question of the poorer class of people. The rich man as regards brandy or anything else can go to well-known houses, and he pays the price and he gets what he wishes. The poor man has to take what he can get from the publican or the local tradesman, whoever he may be, and he knows very little himself as to what brandy is, or what whiskey is, or what anything else is, and he may think he is getting genuine brandy in a case of sickness where the doctor has ordered genuine brandy, and believes it is essential, and now without there being at present any fault on the part of the retailer the man gets something which is three-quarters grain spirit, which, according to the medical evidence, would not have the same effect as brandy. It might even be a matter of life and death for his wife or child who happened at the time to be in a state of collapse. I feel there are most important interests involved, very grave interests, very far-reaching interests, and I hope and feel that the result of this Commission will protect and enable us in our humble way to protect the consumers. I do not think I have anything further to add.

(*Chairman.*) The Commission are much obliged to you for the evidence you have given.

The witness withdrew.

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Dr. Frank Litherland Teed, re-called.

16877. (*Dr. Adeney.*) You have already assisted the Commission by giving evidence before them?—Yes.

16878. I need not ask you for your qualifications. You appear here to-day as an independent witness?—Absolutely so.

16879. You do not represent any firm?—No.

16880. I see in your *précis* you have endeavoured to arrive at the meaning to be attached to the word "brandy"?—I quote certain dictionaries there, Webster's Dictionary of 1853, which states: "Brandy. An ardent spirit distilled from wine. This is the appropriate sense, though the term is extended in America to spirit obtained from other sources, as peach brandy,

cider brandy." I do not know whether you have had these references before.

16881. I think we have had most of them before. Will you give us your own views as to the meaning to be attached to the word "brandy"?—Have you had Murray's Dictionary?

16882. I do not know that we have.

16883. (*Chairman.*) Will you give the principal ones that you think most important?—In Murray's Dictionary the first definition is "Properly an ardent spirit distilled from wine or grapes; but the name is also applied to spirits of similar flavour and appearance, obtained from other materials." That gives the derivation from the Dutch word "brandewijn"—burnt wine. Then I do not know whether you have had Allen's "Commercial Organic Analysis"?

16884. (*Dr. Adeney.*) I think not?—This is from Allen's "Commercial Organic Analysis," Volume 1, page 141, published in 1898: "Brandy, strictly speaking, is a spirit obtained by the distillation of wine. The 'marc' of grapes and other refuse products obtained in the manufacture of wine are frequently employed for the production of an inferior quality of brandy. Such a product contains much more fusel-oil than is present in the superior variety. The peculiar flavour and aroma of 'Cognac' or French brandy are due to the presence of ethyl pelargonate (œnanthic ether) and other secondary products of fermentation. When freshly distilled, brandy is perfectly colourless, but it readily takes up colouring matter from the storing casks, and caramel and similar colouring agents are frequently added to it. It often contains traces of tannin and free acid. Artificial or British brandy is manufactured by flavouring grain spirit. Among the flavouring agents employed for the purpose are acetate, nitrite and pelargonate of ethyl; oils of cassia, cloves, and bitter almonds; tinctures of allspice, galls, capsicum, oak-bark, etc., burnt sugar and other colouring materials. Another very perfect imitation Cognac is prepared by distilling proof spirit with argol, bruised prunes, and a little real cognac. The distillate is then coloured with caramel and flavoured with tannin."

16885. Have you ever met any examples practically in your own professional experience of brandies of this nature?—I am afraid so. I could not give you the history, but I have met with brandies which are certainly not the ordinary brandies of commerce.

16886. I see in your *précis* you give a quotation from Dr. Thorpe's Dictionary?—Yes.

16887. We shall have Dr. Thorpe giving evidence here, so we may perhaps leave that for him to deal with?—I thought I would put it forward as he is a man of great authority.

16888. Then there is one you might give us from Stokes' book?—That is from the same dictionary, but it is a different article written by Mr. Stokes. The other article was written by Dr. Thorpe. "Alcohol," by G. N. Stokes, Esq., Inland Revenue Laboratory, Somerset House, page 38, first column. "Of those possessing importance abroad, the principal is brandy, the production of which from grape wine is an industry confined almost entirely to France. The best brandy is derived from white wine, but a considerable quantity of spirit is imported from the Continent, under the name of brandy, which has either been mixed with other spirits or prepared from substances having no relation to wine. The distillation of genuine brandy takes place in stills which are practically on the pattern of common or pot stills, the improvements being chiefly confined to the adoption of means for carrying on the distillation continuously." Then from the same article on page 36 in the second column, the writer has been writing on the Coffey still, and says: "The English distillers confine themselves exclusively to this apparatus, brewing for the most part from a mixture of grain and malt. The spirit produced does not to any large extent go into consumption as whiskey, the want of flavour being an objection in regard to the better qualities. Large quantities are transferred to the rectifiers who re-distil them with various flavouring ingredients, producing gin, British brandy, British rum, and the various cordials."

16889. We have had the definitions from the Pharmacopœia?—I wish to point out that the Pharmacopœia is the legal standard for drugs. I dare say the Commission have already had that.

16890. Yes?—I also wish to point out that there is no note in any of these Pharmacopœias of an alteration of the definition. If they alter the strength of a drug, in the next edition that drug is listed as being altered in strength, but there is no notice in either the 1885 Pharmacopœia or the 1898 Pharmacopœia that the previous definitions have been altered.

16891. We understand there will be an alteration in the next edition of the British Pharmacopœia?—Of course, as an analyst, I can only work under the Pharmacopœia as it stands.

16892. Might we have your own definition of "brandy," if you have one?—I had not prepared one, but I should say brandy is a spirit distilled entirely from the produce of grape in a pot still. That would be my primary definition, but it might be modified to this effect, that brandy is a spirit entirely derived from the grape retaining the characteristics of such spirit.

16893. That is to say, it has not been too highly rectified whatever still it has been distilled in?—Yes.

16894. You would leave open your definition to brandy to be produced from other countries other than France?—I should not confine it to France. I have had brandies from Palestine, from Algiers, from Australia, from California, some of them closely approximating in composition to Cognac brandy.

16895. Have you had occasion to analyse Egyptian brandy?—I am not sure about Egyptian brandy, but I have had Palestine brandy. Then I desire to draw attention to the Spirits Act of 1880. Section 3 gives certain definitions. Then, if the descriptions of British brandy which I have been reading are to be taken as correct, British brandy would come under the head of a "British compound" and "brandy" would be classed under "foreign spirits." I am assuming that Dr. Thorpe and Mr. Stokes are right, and I am accepting their definitions from those articles which I have put in, that brandy is a foreign spirit, and British brandy is a British compound. Then I quote the definition: "'British Compounds' means spirits redistilled or which have had any flavour communicated thereto or ingredient or material mixed therewith." I do not know whether you have had the Customs Tariff.

16896. I do not know that these references to Ham's Inland Revenue Year-Book need come from you, because we shall have them, I take it, later on?—I should like to draw attention to the fact that the Excise use the word "whiskey" and various other names.

16897. (*Mr. Guillemard.*) The Customs?—I thought that it was conjoint. It is in the Code 377: "Spirits for fortifying. The spirits which may be used for fortifying lime or lemon juice in bond are rum, imitation rum, gin, brandy, whiskey and Hollands, at or above proof." The only point I raise on that is that the names of "rum," "imitation rum," "gin," "brandy," "whiskey," and "Hollands" are being used so that some meaning must necessarily be attached to each of these names by the Customs and Inland Revenue authorities.

16898. (*Dr. Adeney.*) Does that carry us very far? Is whiskey taken as a grain spirit?—I should like to have an opportunity of putting that to the Excise witness who said he did not know what whiskey was.

16899. (*Chairman.*) We are on brandy now?—If he used the word "brandy" I should like to ask him the meaning that he attached to it, because I happened to be here when the first gentleman, an Excise witness, was called in the whiskey case, and my recollection of his evidence was that he knew nothing except "spirit."

16900. (*Mr. Guillemard.*) The brandy will be dealt with when we come to the Customs evidence?—I rather elaborate that as an argument. I do not know that I need go through it.

16901. (*Dr. Adeney.*) Your point will be met, and we shall have evidence upon it?—Part of what I have set out in my *précis* refers to whiskey. I do not know whether I am allowed to refer to that.

16902. Brandy is our special subject now?—All I point out is that the spirits which are not allowed to be used for fortifying lime or lemon juice would be all British compounds other than gin, such as British brandy, spirits of wine and diluted spirits of wine, which prohibition would compel the officer in charge to make a distinction between whiskey and diluted spirits of wine. Then "all unenumerated foreign spirits

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sweetened or unsweetened (except Hollands), such as compounded spirits made in imitation of brandy." I make that point that the brandy duty is one penny less imported in cask than other spirits, and therefore any imitation brandy, if I may use the word, imported as brandy defrauds the Revenue to the extent of one penny a gallon, and that would amount to—I do not know how much, but probably £6,000 or £7,000 a year.

16903. I have no doubt the Customs authorities are protecting themselves, but we shall hear that from one of their own officers?—Then I have tried to get some information from the French authorities, but they do not use the word "brandy." I do not know whether you have had this book of M. Ordonneau.

16904. Yes, we have had that before us?—Then I refer to Girard and Cuniasse. They give a standard for it, which shows that they regard it as an alcohol *brut*.

16905. You are aware that the French food laws have made some regulations with regard to the use of the word "Cognac"?—I understood so from what you put to Mr. Bramall, but I did not know of it before.

16906. The word "Cognac" is restricted to brandy coming from wine grown in the Charente district?—Yes.

16907. Then there are other definitions of brandy which are taken cognisance of by the Excise regulations. Do you know those?—No, I do not know the French law at all.

16908. I do not know that we need dwell on those points, because they have been brought very fully before us?—Then I should like to draw your attention to the fact that "brandy" was used in the Act of Parliament 49th George III., cap. 98.

16909. (*Chairman.*) Is it mentioned in this Spirit Act of 1880 at all?—No, I cannot find it. Neither whiskey nor brandy is indexed in Mr. Ham's book. In this Act of 49th George III., which is in the year 1809, there is a schedule:—

Schedule (A) Inwards.	Duty. s.	d.
Arquebuscade	3	6
Brandy, imported in a British built ship	1	1½
Brandy, not imported in a British built ship	1	3
Citron water	6	9
Cordial water, or strong water, not otherwise enumerated or described	3	6
Geneva, imported in a British built ship	1	1½
Geneva, not imported in a British built ship	1	3
Hungary water	3	6
Lavender water	3	6
Rum, the produce of any British Colony or plantation in America	0	9
Rum of any other sort	0	10½
Usquebaugh	3	6
The produce of the Settlement of the Cape of Good Hope, its territories and dependencies	0	9
Spirits not particularly enumerated or described or otherwise charged with duty	3	6

The point I submit is that as the word "brandy" is used in an Act of Parliament just 100 years ago when no patent stills or any fractionating stills were in use, the word "brandy" then must have meant, and to a certain extent my argument applies to Usquebaugh, a spirit distilled in a pot still.

16910. (*Chairman.*) Do you mean that, because they used the word "brandy" at a time when nothing but pot stills were used, if any improvement in the pot still was made "brandy" would not equally apply? You heard what Mr. Bramall said, which is just exactly what I am putting to you?—I think you would require fresh official definitions before it could apply to anything else.

16911. What are we to do with the method of manufacture? Does it alter or does it not? You might as well say a man must not travel in trains because he always travelled by postchaise?—But it would not make a railway carriage into a postchaise.

16912. But the postchaise is the means of carrying him on his travels. Your brandy here is the product, and yet you say it must be manufactured in a certain way. However, I will not discuss it now?—Very well, my Lord. Then I beg to point out that there is said to be a lot of the featureless spirit produced from wine, but in my opinion this is brought forward as an argument to prevent the analyst detecting fraud. If you take featureless spirit either from wine or from grain or beet-root, or from potatoes, no analyst can distinguish between them, and we hear such a lot about featureless spirit from wine in order to enable the adulterator to use featureless spirit from other sources.

16913. I do not quite follow that. Will you explain it?—We hear a lot about the featureless spirit, silent spirit practically, produced from wine. My own idea is that this substance is brought forward, not because it is largely used, but because it might be used, and if it is allowed to be called brandy then the adulterator can use featureless spirit, silent spirit, produced from other sources, and nobody could detect the difference.

16914. (*Dr. G. S. Buchanan.*) You are referring to the defence in the brandy case?—Yes, in all these cases the defence is raised that the sample might be spirit from wine with the characteristics removed by means of a fractionating still.

16915. (*Chairman.*) That only goes to the difficulty of proving your case, does it not? I do not quite see what the point is you are dealing with. What is the result of it?—I do not know what my case is. I am here to give you evidence. I have no case.

16916. But I do not quite see what you are driving at. It is my fault, I am quite sure.

16917. (*Dr. G. S. Buchanan.*) Is what you mean this, that when you have had these prosecutions in which you have believed that the brandy consisted largely of grain spirit, the defence said: "Oh no; this might equally have been a very neutral highly rectified grape spirit, and in that case if you admit that brandy is what is derived from the grape this is genuine brandy"?—Yes.

16918. What you say is that that is rather a bogey—this highly rectified grape spirit—that there is not very much of it that is used, and that what really is used is the grain?—That is so. That is my idea.

16919. (*Chairman.*) That defence that you say is set up was what Mr. Avory set up in the Hillyer case?—Yes.

16920. That supports your view?—Yes.

16921. (*Dr. Adeney.*) I take it that the neutral spirit that is mixed with true brandy is either a grain or beet spirit and not a highly rectified wine spirit?—I believe so.

16922. Have you in the course of your professional experience come across any evidence as to what really the spirit is that is used?—No, because it is used in Cognac. I have never been to Cognac.

16923. Some of the members of the Commission were in Cognac, and we were told what the spirit was in some cases?—I should suspect in many cases it would be the spirit from molasses, from the sugar worts. I am speaking of the French sugar worts—beet spirit. That must be highly rectified, otherwise it would be quite unpotable, because the flavour of the beet is too objectionable. You cannot stand it in sugar, and you cannot stand it in spirit, and if you want to use a beet product, either a beet sugar or a beet spirit, you must get practically the pure substance out, and even then it is beastly. Beet sugar is not good.

16924. We had it in evidence yesterday from a French witness that even the neutral spirit that can be prepared from wine is a great deal dearer than the beet or the grain spirit?—I should think it would be, because the raw material is dearer.

16925. There is one point I should like to ask you, and that is I am afraid you have been somewhat misrepresented with reference to the so-called ether standard. Would you explain to the Commission how that has arisen?—In the North London case certain analytical figures were put forward—I think three or four points—I have forgotten the exact number, but it was not a complete analysis. The argument gradually shunted down to the ether figure. We dropped the aldehydes and we dropped the acidity, and we dropped the furfural.

16926. You did not include the higher alcohols?—No, that was the only point we did not include. I am speaking from recollection. The argument gradually drifted on to the ethers, and it stuck at ethers, and the decision was given on ethers.

16927. Did you suggest a standard for ethers?—We

suggested 80, but whether that is exact or not I do not know. I have met with them in brandies down to 75, which brandies I have reason to believe were genuine. I do not mean from chemical reasons but imported by firms of high reputation.

16928. You have nothing to suggest to us with reference to the methods of analysis of brandies?—No. Of course the great advantage of sticking to the colorimetric process for the higher alcohols is that then you have a process which can compare with the French chemists. I know my analyses are frequently seen in Cognac, and the Cognac chemists' analyses are frequently compared with mine here, and if I were to determine the higher alcohols on the Allen Marquardt method, or some other method, we should be out of it altogether.

16929. I think you were here this morning during Mr. Bramall's evidence?—Yes.

16930. May I ask you as a public analyst would you view with favour the creation of a central authority to deal with such things as definitions?—If anybody will take part of my work off my shoulders, while I am paid the same, I should be delighted.

16931. You think it is undesirable that the definition of a food or spirit should be left to the definition of an individual analyst?—I think so.

16932. And you think it should be done by a competent authority?—It certainly should, I think. I do not wish to insinuate that the public analyst is not a competent authority.

16933. I mean a public authority who could take evidence on the subject?—Quite so.

16934. (*Chairman.*) Let us try to work this out about the definition or standard or whatever it is. I quite appreciate what you have said. Powers would be got, and what we call the responsible body would step in. Would you do it *pro hac vice* as each question arose, or would you erect a definition board in advance?—I should erect a definition board in advance.

16935. We cannot confine this now to brandy, or whiskey, or anything else. Would you have that definition effected in relation to other matters that may in the future be the subject of prosecution?—I think so. I think that all articles of food should be defined. We have most of them undefined at present.

16936. Occasionally you do get it done by a statute. But look at what it would represent. This public body would have to meet and hear evidence as to definition?—I should leave that to the public body to take their own course.

16937. But if you were going to govern the trade by a definition you cannot leave it to the Government body very well. It is for the public who are to be bound by the definition. Surely they ought to be heard, ought they not?—I should think so, but in the case of tea the Excise practically have to define tea.

16938. But we are talking of the body that is to do a great deal more than anybody that exists now. You say it is to define the ingredients of all articles that may be the subject of food?—To define them, but I should not say define the ingredients quite, my Lord.

16939. What would you let them do?—They would have to define brandy. They might accept the definition I have put forward, or they might accept the definition that somebody else has put forward, but they would have to come to some conclusion about it—the same as with bread.

16940. Every article?—Every article.

16941. That would be legally binding upon the magistrates?—Certainly.

16942. Then that is an administration of the law by means of this body. Before they do that surely I think you will agree that the persons must be heard who might be affected by it. They could not do it behind the backs of people?—I think they would be heard.

16943. At what stage?—You are asking me to put down what the procedure of a body which does not exist would be.

16944. That is a practical matter, and if we are to do any good with it we are very anxious to get your assistance. It must be dealt with from a practical point of view if you tell us there ought to be such a board with such powers. I want to know whether it is practicable. Would your suggestion be that the board should sit and take evidence?—I should think so.

16945. Then, of course, they must summon different classes of traders, producers and purchasers and shopkeepers in respect of all these articles?—Yes.

16946. Then they lay down a definition. Is the magistrate bound to accept that definition, even if it is shown to him that it is wrong?—I imagine it could not be wrong, because the definition would have a legal binding effect.

16947. But it is a question of fact. Supposing the traders say it ought to be put in such and such a way and the Board have discharged their duty perfunctorily and have not come to a right conclusion. Must the magistrate go wrong too, because they have gone wrong? This is judicial, and I am seeing how the law is to be administered?—There are certain definitions in the Sale of Food and Drugs Act. They may be wrong.

16948. But the analyst gives evidence, and he can be cross-examined?—But the definition is a legal definition.

16949. Has that been arrived at by the Legislature?—Yes, in the case of butter and margarine.

16950. Yes, but here you propose to get a definition in respect of all articles that may be the subject of prosecution. It is very different from taking butter and margarine?—It may be worked in another way. If the prosecution was instituted on any subject you like—bread, for instance—there should be a right of appeal to this body to define the thing, and as far as the scientific part of the case was concerned it should be really tried by this new body.

16951. That is just the point I put to Mr. Pheysey from the Army and Navy Stores. As I understand, you would have the magistrate, unskilled, assisted by a body of men who are skilled?—Yes.

16952. We should call them experts?—Yes.

16953. Who would aid him to give a judgment after he had heard the evidence? Do not you think that is a better and more hopeful procedure than by asking for definitions to be made in respect of all articles that may be the subject of prosecution?—Yes. I did not know you would be asking me questions on this point or I would have tried to get up some scheme, but I merely vaguely know we do want somebody to assist us in these matters.

16954. The difficulty arises with regard to what would be said about your definition, which, of course, as a matter of phraseology, would want to be worked out to see how the definition is possible. It is reasonable that you should ask for a little time to think of it?—I do not know whether your lordship is acquainted with the method of prosecution in the case of deficiency in the illuminating power of gas?

16955. Where does that arise?—There you have a sort of scientific court, which hears the case before it goes to the police court.

16956. That is by statute?—Yes.

16957. Does that give a report to the police magistrate?—No, but it may bar a prosecution.

16958. That is a preliminary matter of procedure which is regulated in respect of that matter?—I think in the latest Act they have a court that may impose a forfeiture.

16959. Perhaps you can hand that in to us by and bye?—Yes. It is under the head of the chief gas examiner.

16960. I am sure, Dr. Teed, we shall have this from you that the establishment of a definition court is a matter of very great difficulty?—It is. There are various ways of doing it, but which is the best it is difficult to say.

The witness withdrew.

(Adjourned for a short time).

Mr. W. H. Chaplin.

23 March 1909.

Mr. WILLIAM HENRY CHAPLIN, called.

16961. (*Dr. Bradford.*) You are, I think, managing director of W. H. Chaplin and Co., Limited?—Yes.

16962. What is the nature of your business?—Wholesale wine and spirit merchants.

16963. You have been in the trade for a very considerable time?—Yes, I have been in the trade for over 40 years.

16964. Will you tell the Commission your opinion as to the significance that is attached to the term "brandy"?—The first reference in my *précis* is to the dictionary definitions of brandy. The dictionaries all agree that the word comes from "brandwine," in German "branntwein," that is to say, burned or distilled wine; but the word "wine" has been used to designate not only the fermented juice of the grape but preparations of other fruits and vegetables by fermentation, hence we have the titles "Corn brandy," "Peach brandy," etc.

16965. When the term has been applied to spirits other than those derived from grape juice, has a qualifying term like "Corn" or "Peach" always been applied?—I think I may say "yes."

16966. With regard to the use of the word "brandy" in England, what have you to say?—In England the word "brandy" was for a long time used only in connection with the spirit imported from France, the bulk of which was shipped by merchants of Cognac, the better qualities being distilled from the wines of the district, which, although not pleasant to drink as wine, produce remarkably fine brandy.

16967. From what other parts of France was brandy shipped?—From Bordeaux and other places.

16968. But the bulk of it is from Cognac?—Yes.

16969. Then I think you state in your *précis* that some English distillers made an imitation article—a mixture of grain spirit?—Yes, which they named "British brandy."

16970. Was it always qualified in that way?—Yes.

16971. It was always called "British brandy"?—It may not be when it gets to the retailer, but is by the wholesale merchant.

16972. What has been the custom in your firm as regards the use of the word "brandy"?—We have adhered to the use of "brandy" as the article made from the grape; brandy pure and simple has been the article imported from France. We applied recently the term "Pure Grape Brandy," but I think I am right in saying that it was after the brandy prosecution that the term "Pure Grape Brandy" was introduced by ourselves and others.

16973. You have been in the habit of describing brandy derived from the grape, not simply as "brandy," but as "Pure Grape Brandy"?—Yes.

16974. I gather from your *précis* that you are not in favour of restricting the term "brandy" to any particular country?—No.

16975. Is there any appreciable quantity of brandy derived from other countries besides France, in your experience?—A very considerable quantity is derived from the following countries—Algeria, Spain, Portugal, Italy, California, Australia, and Cyprus.

16976. Now I want to ask you a question as to the origin of these brandies. Do you think they are derived from wine produced in all these countries?—Certainly.

16977. You have no knowledge of the importation of wine into these countries, and subsequently undergoing distillation there and being re-exported as brandy?—No; it would be too expensive.

16978. The quantity of brandy imported from these countries other than France has increased since 1879, has it not?—Yes.

16979. To what cause do you attribute that?—To the destruction of the vineyards in the Cognac district.

16980. Do you think the destruction of the vineyards was followed by any alteration in the kind of brandy exported from the Cognac district itself?—Certainly.

16981. Can you tell us at all about the nature of that alteration, if any?—There was a mixture of beetroot spirit with the actual produce of the grape. I would add that after the complete destruction of the Charente vineyards in 1897, the leading Cognac shippers, who had made a reputation for fine qualities and who shipped only fine qualities, ceased to offer young brandies, and confined their business to the sale of their old stocks and those remaining in the farmers' hands of the vintages ending with 1878. Some of them began to offer young brandies again about 1885 or 1887, but Messrs. Hennessy and Martell not till 1893 and 1895: thus the reputation of fine old Cognac brandies was kept alive in a limited volume of trade.

16982. You go on in your *précis* to state that after the destruction in 1879 of the vineyards in the Charente district an attempt was made to produce brandy in England?—Yes, an attempt was made to produce brandy in England from the Californian grape juice imported in a condensed form.

16983. What came of that attempt?—The prejudice in favour of the article imported from the old source of supply made the venture a failure, although the product was a good one.

16984. Was this brandy obviously different in any way from the Cognac brandy?—It was fuller in body.

16985. Do you think as regards flavour, and so on, it was equal to it?—As regards flavour it would be hardly equal to the French brandy which has a delicate fine flavour.

16986. But that production has ceased?—Yes, it was a financial failure and has ceased.

16987. I gather from your *précis* that a considerable quantity of brandy imported from France is a mixture of beetroot or grain spirit and Cognac?—That is so.

16988. And that that admixture arose largely in consequence of the destruction of the vineyards and the following very short quantity of the actual brandy made in France?—The use of the other spirit did exist before the destruction of the vines, but it became very much more marked afterwards.

16989. Was there not some other cause for this mixing of grain spirit with Cognac other than the destruction of the vineyards?—Yes, the demand for cheap brandies.

16990. At the present time has the production in the Cognac district reached its former level?—No, it is very much below its former level.

16991. You mean the level before the destruction of the vineyards?—Yes.

16992. But it is much higher than immediately after the destruction of the vineyards, is it not?—Yes, decidedly.

16993. Has there been any material increase in the production of brandy from other parts of France?—In certain years, yes. The total production of wine in France was greater in the year 1907 than in the year 1874, whereas the production in the Charente and Charente Inférieure districts in 1907 was only a quarter of that in 1874.

16994. There has been a greater increase in the regions other than the Charente?—Yes, that is so.

16995. There is a certain amount of brandy that goes by the name of Algerian brandy, is there not?—Yes, a considerable quantity.

16996. What is the origin of that brandy?—It is made from Algerian wine.

16997. It is not made from a French wine imported to Algiers?—No.

16998. How do you suggest that the merchant and the consumer are to be protected from having mixtures of grape spirit and grain or other spirit passed off in place of pure grape brandy?—My view is that the expert taster is the only reliable guide. Of course, certificates of origin, where they can be obtained, are of value, but as throughout the world it will always be the case that large quantities of wine brandy are distilled by small proprietors, over whom there is no possibility of Excise control, these certificates cannot always be available, and in any case they only protect the first receiver of the brandy in bulk.

16999. Have you any suggestions that you can make with reference to any similar protection in the case of bottled brandy?—Those certificates might, it is true, be passed on to any bottlings in bond if our Customs would alter their present practice, which is to refuse any certification of operations performed under their supervision; but this would not help the consumer in public houses where the spirit is sold in glasses.

17000. That is where the difficulty is most marked?—Certainly.

17001. You have no suggestions to make as regards any system of protection there?—I am afraid not.

17002. Do you rely more on the opinion of the professional taster than that of the analyst?—Yes.

17003. You state in your *précis* that you have no confidence in the analytical test alone, but I suppose you have confidence in an analytical test combined with that of an expert taster or would you rely on the expert taster alone?—For buying purposes we should certainly rely upon tasting alone, but the analysis may be of some use for the purpose of selling as a recommendation of the article. Since the brandy prosecutions we have always been asked by our customers to guarantee a certain proportion of ethers.

17004. (*Dr. Adeney.*) Have you given that guarantee?—Yes.

17005. (*Dr. Bradford.*) That has been given on the basis of an analysis?—Yes.

17006. So that you found an analysis useful from that point of view?—Yes.

17007. (*Dr. G. S. Buchanan.*) I may take it that your firm approves of a distinction being made between brandy which is the product of the distillation of the grape juice and brandy which consists of a mixture?—Certainly.

17008. You told us that the special description, such as "Corn brandy" and the rest of it, was given by the wholesale dealers, although it might not, of course, be passed on by the retailer?—Yes.

17009. In your catalogues you have, I understand, made a distinction within the last few years between the brandies that you would regard as grape brandies and others?—Yes.

17010. A copy of your catalogue of June was put in last time and I have it by me. I notice that you quote for a number of brandies in bulk which have written against them "Guaranteed pure grape brandies by the shippers." What does that mean? Is that a simple declaration by the shippers that you have dealt with?—Yes, it would only mean that, and they invoice them as pure grape brandies.

17011. Have you taken any advantage of the French acquit system in regard to new purchases? Have you asked for their production?—We have taken very little advantage of that, only when a wholesale customer wants it passed on to him.

17012. It has happened in some cases already that the wholesale customer has asked for the French guarantee?—Yes. The shipper has always held them at our disposal.

17013. They are always held at your disposal?—Yes.

17014. There are certain brandies in your list, I see, which are not marked as pure grape brandies. Presumably they are mixtures with grain or beet?—Yes.

17015. The man who buys from you can distinguish them not because you say they are grain brandies or anything of that sort, but from the fact that they have not got "pure brandy" written against them?—And from the fact that after the Islington prosecutions we put a protective label upon the bottle which said "This brandy is not guaranteed pure grape."

17016. Is that still done at the present day?—It is being done.

17017. Are your customers mainly wine merchants or grocers?—Yes, wine merchants and grocers and the trade generally.

17018. May I take it that any man purchasing from you would be able by means of the statements that you make in your catalogue, on your labels and so forth, to know whether the brandy he was buying was grape brandy or not?—Certainly.

17019. To the extent of course that you can give it by these guarantees that you obtain?—Exactly.

17020. Are you suspicious of these guarantees being genuine in many cases?—That is a very hard question to answer. In some cases the shipper would be satisfied if he had his analyst's guarantee of the requisite quantity of ethers.

17021. In your business and in your catalogue what does "Cognac" signify to you? Does it mean that the brandy comes from a Cognac house or does it mean that it is Cognac in the significance of the French law, that is to say that it is entirely derived from the Cognac district?—I may say that that French law is only a few months old. It was attached only to anything shipped by a Cognac house as brandy.

17022. So that the use of the word "Cognac" in the English market at present is still somewhat loose?—I think it must apply to anything sold by a Cognac house. Of course in the future when old supplies are wiped out that will be by the new French law restricted to the produce of the districts designated as entitled to use the title "Cognac."

17023. (*Dr. Adeney.*) I notice you have great belief in the expert taster, and I think most of the evidence we have had goes to support you, but we had one expert before us who suggested that the expert taster was not always to be relied upon. He suggested he was extremely reliable in what he called the synthetic production of brandy blends, but if the brandy came in contact with soiled vessels, such as dirty funnels or anything of that kind, the taste of the spirit might be sufficiently altered so as to upset his judgment. Do you agree with that experience?—I think if the spirit is derived from wine the expert taster will always be able to say that it is a wine spirit.

17024. And if it has not been admixed with grain or spirit?—Not to any large extent.

17025. You refer in your *précis* to a Technical Committee of Œnology appointed in 1904 by the French Ministry of Commerce with reference to the question of analyses of brandy, and the minimum and maximum coefficients of secondary products contained in brandies, and to the report that they made?—Yes.

17026. I should be glad if you would read that in order that we may get it on the minutes of evidence?—"The proportion of secondary products contained in grape brandies varies considerably according to the method of distillation employed for their manufacture. Therefore it does not appear to us possible to fix a precise maximum or minimum proportion. The whole of the results of analysis, that is to say, the proportions of the different volatile substances and the relationships which exist between them, should be taken into account; independently of the amount of the secondary products. Moreover, chemical analysis should always be supplemented by tasting."

17027. In your *précis* I notice you have made one or two suggestions with reference to the question of the sale of brandies in quarter and half bottles?—Yes. I would also point out that the securing the needed supply of genuine grape brandy in case of sickness would be greatly facilitated if the wine merchants and others holding off-licences were allowed to sell in half or quarter bottles; the consumer would then have the guarantee of the shipper or well-known merchant. At present these dealers cannot sell less than a bottle, and so the poor man is driven to buy at the public house.

17028. Then in your *précis* you give some interesting figures with reference to the question of compulsory bonding, which I think we should like to have on the minutes?—Yes. I venture to add a word on the subject of compulsory storage in bond. I do not think that this is necessary or that it would produce any good result whatever. It would merely increase the cost of large quantities of wholesome spirits of the blended type, and in regard to the finer qualities, it would debar our merchants from drawing on the vast stocks which are held in the producing countries, France in particular, to supply the markets of the world. Thus buyers of bulk brandy would be driven to rely on the stocks held by merchants on this

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side. In the old days, when the consumption of brandy was so immensely larger than at present, the practice of holding large stocks of bulk brandies in bond prevailed among the leading merchants, and proved almost always a safe investment. The figures set out below of imports, home consumption, and stocks held in pre-phylloxera years, and subsequently, will, I think, be interesting:—

Pre-phylloxera Years.	Imports.	Home consumption.	Stock 31st Dec.
1872	5,372,486	3,715,675	12,238,401
1873	6,634,246	4,276,481	12,389,310
1875	4,087,441	4,470,952	10,080,909
1876	7,953,913	4,494,743	12,866,735
1878	3,565,498	3,968,872	10,254,730
1879	5,051,581	3,549,348	10,698,772

Post-phylloxera Years.	Imports.	Home consumption.	Stock 31st Dec.
1885	2,780,122	2,716,359	4,614,816
1890	3,102,199	2,642,111	5,157,385
1895	2,605,603	2,499,186	5,981,350
1900	2,602,366	2,623,376	4,839,000
1908	1,745,662	1,963,071	3,683,000

17029. (*Dr. G. S. Buchanan.*) Are these Board of Trade returns?—Yes. It might be interesting to the Commission to see the prices of brandy from 1840 up to the present time.

17030. Yes, it would be very interesting I think?—I will hand in to the Commission a list of those prices. (*Same handed to the Commission.*) Those prices are within 2d. or 3d. of the prices of Hennessy's or Martell's brandy.

The witness withdrew

Mr. F. H. Godsell.

Mr. Frederick Hill Godsell, called.

17031. (*Mr. J. Y. Buchanan.*) Will you tell us the nature of your business?—My business is a wine and spirit merchant, and agent.

17032. In London?—Yes, of 81, Great Tower Street.

17033. How long have you been in the business?—I have been in the business for over fifty years—fifty-two years.

17034. Were you previously in France in business?—I was in Cognac for a considerable time, and I there learnt my business in brandy.

17035. The nature of your business is importing?—The nature of my business is importing, and doing in all wines and spirits.

17036. Not specialising in brandy?—Not specialising in brandy, but a great portion of my business is in brandy, and has been all my life, and my father before me.

17037. I am to understand by "brandy," Cognac brandy?—Yes, Cognac brandy, decidedly.

17038. Can you give us a definition of the word "Brandy"?—Yes.

17039. What is your definition?—My definition of brandy is that it is the wine from the grape distilled into brandy through a pot still, and I consider that Cognac brandy is one of the first brandies of the world—it is the first brandy in the world, and there is no other brandy like it. It contains commodities which no other brandy can contain. The soil of Cognac produces those medicinal properties in brandy which no other brandy in any other part of the world can contain.

17040. Of course, the soil affects, in the first instance, the wine that is made?—Yes, the soil in the first instance affects the wine that is made, and goes into the brandy.

17041. Then in Cognac is the spirit from the wine distilled at such a gentle temperature that these ingredients can certainly come away along with the alcohol?—They come away with the alcohol decidedly, but then, of course, age does a great deal towards developing them, and the long contact with the special French oak casks.

17042. What is your view as to the nature of the actual effect of ageing?—The nature of it is, of course, that oils which are in the new brandy develop into ethers, and other properties which I cannot exactly describe medicinally, but they develop into medicinal properties which no man but a medical man can understand.

17043. I suppose your view about the medicinal advantages of it is derived from medical information?—No, not at all, but it is derived from experience. For instance, fifty-two years ago, when I was younger, the wines were grown in Cognac in such a way that you only had to stick a branch into the ground and it grew immediately, and consequently we never heard in those days of such things as we hear to-day about brandies. We never heard of plain spirit; we never heard of brandy being made out of dried fruit, and we never heard of ethers; we never heard of any of these what I may call nostrums, but we heard of nothing else but Cognac brandy, and Cognac brandy was the medicinal beverage of those days. Then after that came the phylloxera in 1878 and 1879, and during those years up to 1893 we had brandy imported into this country mixed with plain spirit. As the years advanced so we had more spirit and less brandy, until we began re-growing the vines, and in 1893 we had a very fine brandy, but unfortunately for the trade, and for the public generally, they had got a taste of plain spirits in their minds, and they, unfortunately, did not know exactly what real brandy was, and I am afraid they do not know much about it to-day. My view is that brandy is an article which cannot be found in any other part of the world except in Cognac. True, you may have brandy from wine of any district, but if you call it Cognac brandy it is not Cognac brandy.

17044. After the phylloxera I suppose the vines in the Cognac district were entirely destroyed, were they not?—They were.

17045. What were they replaced by?—They were replaced by French vines grafted upon American roots.

17046. Did the grapes from those vines, as a matter of fact, produce wine similar to the wine that was produced in the pre-phylloxera days?—Yes, decidedly.

17047. You are quite certain?—Yes, I am quite certain.

17048. So that you would accept it as correct that the spirit distilled from the grape from these new vines would have the secondary products which were in the original brandy?—Yes, decidedly. I do not say so much at first, for it requires age upon the vines to give you the same products, but after they have been in the ground a certain number of years you get the same produce as you did originally.

17049. Have you an idea of the length of time that it takes for these vines to produce the best wine?—I am afraid that is an agricultural matter which I cannot go into, but I should say three or four years decidedly. As a matter of fact, a vine that produces in the first year is not so good as a vine that produces after it has been three years in the ground.

17050. What was the brandy that you got in 1893?—That was from vines that had been planted three or four years.

17051. You would know, as an experienced Cognac merchant, whether the products that you got in 1893 were as good as you got in 1878?—Those that were sent here in their natural state were quite as good as the previous brandies.

17052. Do you think, as an experienced connoisseur, that you could have told the difference?—I should say to you that it was as good as the previous products decidedly, that is to say, those brandies that were shipped pure. Unfortunately, in 1893 there were a great number of brandies not shipped pure.

17053. Since 1893, in your opinion, has the genuine Cognac brandy improved as the vines have grown older?—Without any hesitation I say decidedly.

17054. And you think they have now got back to the state they were in in the pre-phylloxera period?—I say that the 1906 brandy is as good brandy as we had from 1875 to 1878.

17055. You think the vines have in this time been able to eliminate the American taint from them?—Yes, decidedly.

17056. Entirely?—Yes, entirely. I do not think the American taint has got anything to do with it; it is the soil.

17057. Of course, they had to bury the root?—Yes, but it is the soil that produces the brandy.

17058. I think you have something to say about the Government Excise certificates?—I have.

17059. Will you tell the Commission what your views are? Is your view that of guaranteeing the thing to be the produce of the grape only?—I do not think we can do better than follow the example which the French have set up.

17060. And that is, shortly, what?—That if we can get a guarantee from the French Government, which we should do, that it is the produce of the grape and that if we get a special certificate for Cognac brandy, I do not think we can ask more.

17061. And that is easily got?—Yes, I should say it is easily got, and I think, also, that all case brandies should bear a stamp that it is real Cognac brandy.

17062. You mean on the bottle?—On the bottle itself, which ought to bear a Government stamp stating that it is pure Cognac brandy.

17063. (*Chairman.*) What Government stamp do you mean? Do you mean a stamp of the French Government or the English Government?—Either one or the other. It might be divided between the two Governments, and the trade should pay for it.

17064. (*Mr. J. Y. Buchanan.*) In that way you would reduce the unit of brandy sale to the bottle, so that any one buying not less than a bottle could be quite sure of getting Cognac brandy?—Yes, in order that the public could be quite sure of getting Cognac brandy and that they could be quite sure that they are getting what they ask for when they ask for Cognac brandy. It is the name of "Cognac" which I am going upon, and I say that the British public should have what they ask for, and that if they go into a place and ask for a bottle of brandy, and put down their 3s. 6d., 4s., or 4s. 6d., that what they receive should be what they require, and what they ask for when they ask for Cognac brandy. It is a medicinal spirit, and I consider that what they ask for they should receive.

17065. But if a customer asks for a glass of Cognac brandy, then, of course, your stamp is not of much use to him?—No, but I say if you have got your certificate from the French Government that every drop of brandy that comes into this country is grape spirit there is no fraud upon the public, and they could go into a public-house and ask for a glass of brandy without getting plain spirit or without getting spirit made from dried fruit, or without getting spirit made from alcohol.

17066. That is to say, the publican who buys it can get that, but the person that the publican sells to may not get that?—But if you have not got any importation of a mixture into this country, which I am trying to avoid at the present moment, the public is guarded even as to the bulk.

17067. That introduces prohibition as well?—Quite so, and that is the very thing that I am asking for. I say that I do not think any stuff should come into this country except when it comes from a grape-producing country, and that we should have the guarantee of the country that that is the produce of the grape, and nothing else, and no mixture. We have got stuff coming into England at the present moment called Egyptian brandy, but it never saw Egypt, for there are no grapes in Egypt, but it comes from Marseilles; it is a mixture of any mortal thing, and is like poison. You have stuff coming from Hamburg, but there are no grapes in Hamburg, and you have stuff manufactured in England which is not brandy but alcohol, and if you stop any of those what I call nostrums coming into this country you have nothing but the pure juice of the grape.

17068-9. You say at the end of your *précis* that you consider that patent stills ought to be avoided?—That which is made in a patent still is not brandy. In a patent still you take away all that makes brandy.

17070. Of course, the patent still can still supply commercial brandy?—If you put wine into a patent still it becomes alcohol.

17071. But one witness showed us how you can get the alcohol with any amount of the secondary products?—If you put grain into a patent still you get alcohol; if you put malt into a pot still you get malt whisky; if you put grape wine into a pot still you get grape brandy; but if you put wine into a patent still you get alcohol. You take away all the properties that form the brandy, and you take away every property that forms the malt whisky.

17072. Then, in point of fact, you object to the use of the patent still for distilling wine?—Decidedly so.

17073. (*Dr. G. S. Buchanan.*) I did not gather whether your business was selling direct in any way to the public?—I sell direct to the wholesale trade. I am not a private wine merchant, I do not sell in dozens, but I sell in quantities. I am an importer and seller to the wholesale trade entirely.

17074. The wholesale trade would, of course, comprise the wine merchant?—The wine merchant and the brewers and the rectifiers.

17075. So that spirits that pass through your hands would, in a number of cases, ultimately be sold to the public-houses, would they not?—I presume so.

17076. They are sold to brewers?—Yes.

17077. Can you give us any indication of the character of the different brandies at the present time that go to brewers? There is, of course, grape brandy, and there is, of course, Cognac brandy, and there are, of course, as you have told us, mixed brandies?—Do you want me to tell you what goes to the brewers?

17078. Yes?—What goes to some of the brewers, unfortunately, to a very great extent is what is called British brandy, which is nothing else but pure alcohol with a little flavouring, and a little oil of Cognac in it, or to a very great extent it is. Then we have got very cheap muck which comes from Hamburg, and we have stuff coming from Marseilles, which is called Egyptian brandy. Then we have got blended brandies made in this country; we have got so-called brandies coming from the Cognac district which are plain spirits brought from the North of France, and brought on to the Charente quay, and so flavoured and sent over into this country in very large quantities, and sold at 2s., and even, I might say, at 1s. 9d. a gallon. Since Mr. Fordham's judgment we have got so many ethers to arrive at and we have brandies coming into this country, or so called brandies, which are nothing but plain spirit flavoured with ethers, and we also have real grape spirit, and we have also got real Cognac brandy.

17078*a*. As a merchant do practically all those types of spirit pass through your hands?—I will not have anything to do with some of them.

17079. That I gather, but do you carry your objection to the extent of not dealing with any brandies which are not entirely to your knowledge the product of the distillation of grape juice?—I decidedly do; I carry my opinion to this extent, that if I sell brandy it must be the produce of the grape.

17080. If the brewer wants something at a price, and you cannot supply him with the produce of the grape at that price, is there anything you supply him with under another name?—If I do it comes under a red certificate from Cognac without any name upon it, and without any word "brandy"; it would be sold to them as it is. We do our business as honestly as we possibly can, and we will not sell that which we do not guarantee.

17081. I am sure that is so, but in the case that I am putting to you you would sell what you cannot guarantee with a statement that you cannot guarantee it?—Yes. If a man asked me to do such a thing I would say, "I would rather not, but if you want it you shall have it, but I sell it to you as it is."

17082. Can you tell us a little more about your use of the word "Cognac"? Do you take any steps yourself to limit the word "Cognac"?—I myself limit the word "Cognac" to the district which has been now limited to the Cognac district by the French Government. That limit I cannot exactly tell you now, because I have not got a map with me at the present moment, but, of course, there are several growths of brandy in the Cognac district. We have the Bons Bois, the Fins Bois, the Grande Champagne, the Petite Champagne, and so on.

17083. Yes, we have had evidence about that. Is the strict meaning you attach to the word "Cognac"

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when you use it made clear in any catalogues, or lists, or statements?—It should be.

17084. Do you take any steps to make that clear?—I do not advertise.

17085. You were saying that you wished that there should be a Government stamp with the genuine Cognac brandy which, of course, is very much imported in bottle, is it not?—I will not say to a very great extent. It is very much advertised in bottle.

17086. You were saying that you would like to see some sort of Government stamp on the bottle proving its origin from Cognac?—I should.

17087. We have had evidence here that the new arrangement under the French law with regard to the use of the word "Cognac" on labels and bottles which are put on for export is itself a guarantee to some extent?—It is to some small extent.

17088. You consider it is to a very small extent?—I consider it is a very small extent, as an expert, and I think I may put myself down as an expert. After 52 years in the trade I think I ought to know something about it. I can distinctly say that there are many brandies imported in bottles here with the word "Cognac" upon them which are not Cognac brandy.

17089. Do you know the distinctions that the French witnesses gave us last time that are required officially between the use of the word "Cognac" as signifying the place where the trader resided? You can put "Merchant at Cognac" on anything, but if the word "Cognac" appears without that statement there is a guarantee, as we understand?—You can do that, it is true, but I am afraid the British public would not quite see the distinction.

17090. That I quite understand, but I want to know whether you do?—I do not think the British public would see the distinction, whereas if they saw a Government stamp they would see the distinction. There are more than three or four houses in Cognac who are shipping very fine brandies, and some of them can do just as well as others, and they are not at such expense as some of the others are.

17091. You are an official taster, are you not?—Yes, I am.

17092. You are official taster to some of the Government Departments?—Yes, to the War Office.

17093. Can you tell us what that involves? Is it mainly spirits that you are concerned with?—It is brandy and wine—in fact, in everything that they require.

17094. In the case of brandy, on what sort of occasions do they require your services?—Whenever they want brandy for hospitals.

17095. Do you have to see whether it comes up to the standard?—The samples are put before me covered up, and I have to tell them my choice. I do not know whose they are; sometimes I choose one, and sometimes another; it depends upon the quality. I have to distinguish which I think is the best brandy of the lot, and I have to distinguish whether there is plain spirit in it or not.

17096. (*Dr. Adeney.*) Do you exclude the continuous form of still that is used in the Midi district for the production of brandy from the grape?—I do not know what the still is that they are using in the Midi. That I could not tell you, because I was brought up in the Cognac market, and therefore I only know the Cognac market. Of course, the wine in the Midi is of very low quality indeed. One cannot compare the wines of the Midi with wines of the Cognac, and I have no doubt that a great deal of the wine of the Midi has been mixed with the wines of the Cognac and sold as Cognac in this country.

17097. That would be allowed in France?—Yes. If it was sold as wine spirit I would have nothing to say against that, but it should not be sold as Cognac brandy. It is the Cognac brandy which I am standing upon at the present moment. I say that the public should buy what they think they are buying, and that it should be delivered to them, that is to say, if you are going to have a glass of port wine you expect to get a glass of port wine and not a glass of Tarragona, and if you ask for a glass of Cognac brandy you expect to get a glass of Cognac brandy and not a glass of grape spirit coming from other parts of the world.

17098. I think we understand your position on that point, but would you exclude the importation into this country of Midi grape spirit as brandy?—No, it is a grape spirit; I could not do that. If it is a grape spirit I say it is brandy, if properly distilled, but it is not Cognac brandy.

17099. (*Chairman.*) I want to know a little more as to your system of checking fraud. You want to prevent fraud?—Yes, I want to prevent fraud.

17100. And that assumes that there are fraudulent people with whom you wish to interfere?—Yes, decidedly.

17101. What would your checks be? The brandy is manufactured in the Cognac district, and principally it is, I believe, or a great proportion of it, sold in bottles here?—A large portion.

17102. You want the French Government to interfere in the distilleries at Cognac?—They are interfering.

17103. And you wish them to do it?—Yes.

17104. And to save our trade from fraud?—Yes.

17105. What do you wish them to do?—I do not think they can do much more than they are doing now.

17106. What would you say that we should ask them as a national obligation to do?—One thing is that you could say that they should have a stamp upon all brandies coming to this country as Cognac brandy, that they should be distinguished from grape brandy.

17107. Not only coming as Cognac brandy, but being Cognac brandy?—Yes.

17108. You say that the Government should come in and see that a stamp is put on, or they are to put it on. They are to become guarantors of that being Cognac brandy?—Yes.

17109. Supposing there is Cognac brandy and Midi brandy. Is the Government to taste them?—You have two distinct warehouses there. You have one warehouse where there are spirits and nothing else, and in the other part you have the distinguishing point of grape spirit and Cognac brandy, and they know as well as possible which is grape spirit and which is Cognac brandy, and the consequence is they only want another certificate to show which is Cognac and which is grape brandy.

17110. That is assuming that the Government officers are not defrauded?—We must put it down that the Government officers are not fraudulent, or we hope so.

17111. I never said that they were fraudulent. I do not know why you should laugh at the fact that the Government officer may be defrauded. You are endeavouring to detect fraud by this check. You make the Government guarantors of the fact that that is Cognac brandy?—Yes.

17112. Of course you would make that national demand upon the French Government?—Yes.

17113. Now, assume that the brandy has travelled from Cognac to the port of exportation, wherever it may be—Havre or anywhere else. Again supposing a fraud takes place, and there are substituted bottles, and they bear that guarantee that they are Cognac brandy, but they are not?—But it is travelling under an Excise paper. How can it be touched?

17114. But I am speaking of a fraud?—But they cannot change the bottles *en route*.

17115. Why not?—Do you mean to say if I am sending a case of wine from London? If I send a case of brandy from London to Newcastle I have an Excise paper upon that case, and that cannot be changed.

17116. But I am putting to you that the goods can be changed?—How could the goods be changed?

17117. Of course they can take one bottle away and put another there. You do not seem to understand that I am speaking of fraudulent people?—They could not possibly open a case and put another bottle in.

17118. I do not know whether you understand my question. I did not put to you that they could put one bottle in?—But it would be impossible for a thing which is going under bond to be changed.

17119. Will you try and follow me? I understand now that it has got into the hands of the merchant?—

No, it has to come from Cognac to be shipped to this country.

17120. Under the control of the merchant, I presume?—No, it is under the control of the Government on the railway.

17121. Do you mean to say that your plan is that, when the Cognac merchant sends brandy here to London under contract, the French Government is to take charge of all these consignments?—The merchant has to put it free on board at Charente or St. Nazaire.

17122. What has the Government to do with it?—The Government has to do with it from the beginning.

17123. Do you mean to say that the Government have physical control of it?—The railway has charge of it after it leaves Cognac.

17124. So, of course, in every case the railway that carries it has charge of it? You spoke just now of the Government having charge of it?—Yes, in the warehouses.

17125. I have started by sending it from the merchant in France to the merchant in London, and we are on the journey now?—But it has to be put on board at Charente.

17126. And then it travels not under the charge of the Government?—Not on board the ship.

17126*a*. But I am speaking of it travelling to the ship, travelling through France?—How can they touch it on board the ship?

17127. But I have not got on board the ship yet?—I do not know what you are driving at. I cannot understand what you are saying.

17128. We will start with the goods from Cognac. They have to travel through France in order to get to the port of exportation if they are coming here to England?—Yes.

17129. Under whose care are they then?—Under the charge of the railway.

17130. That is the railway's care?—Yes.

17131. Now you have got rid of the Government?—Yes.

17132. And you have got rid of the Government guaranteeing that that which is delivered at the port of exportation is the same that started from Cognac?—Yes.

17133. Who is answerable for it being the same?—There is nothing that can be touched.

17134. I did not ask you anything about being touched. I ask you who is answerable for it being the same as that which started from Cognac?—It is the same; it must be the same.

17135. But we are dealing with fraudulent people?—It must be the same. It has left the warehouse at Cognac under an Excise certificate, and the Excise certificate follows that case from Cognac to Charente, the port of exportation. How can the railway touch it?

17136. I did not say that the railway did touch it?—Or how could anybody else touch it?

17137. You are dealing with goods rendered valuable by the Government guarantee?—Supposing I send a puncheon of rum under bond from London to Newcastle. I have given my bond. I have to give a bond that those goods shall arrive at the same gauge, the same strength, and the same everything as they left the bond in London, and that they shall arrive at Newcastle at that strength and those gallons, and if they do not arrive at Newcastle at that same strength and those same number of gallons the Customs would come down upon me and say, "Mr. Godsell, there is a loss in transit." Then I go to the railway company and say, "What have you done with my goods"?

17138. We are not dealing with the same point at all. In that case it is evident?—It is the same in France. The goods leave the warehouse of Messrs. Tom, Dick, or Harry in Cognac, or whoever they may be, they have to pass a bond to remove it from Cognac to Charente, and when it arrives at Charente if there is a loss in the gauge, or in anything, who is liable? Why, the man in Cognac.

17139. I really do not think you are attending to me?—I really do not know what it is that you want.

17140. You do not. You take brandy to the French port and it arrives in England. Where is your guarantee directly it arrives in England against any fraudulent dealing with those goods?—The guarantee is that it has never left the Government that I can see.

17141-2. Which Government?—Both Governments. It has never left the bond of the Governments.

17143. You say that it has not left the bond of the Governments, but as yet you have only dealt with the French Government?—I say it has never left the bond at all. It has been under the charge of the carriers, and that is all.

17144. Of course, but it is delivered to the merchant at some time?—Yes.

17145. Has it left the bond when it is delivered to the merchant?—It has left the London bond.

17146. Has it left the bond?—When it leaves the London bond.

17147. What other bond is there?—When it has left the Cognac bond it has not left the bond.

17148. When it is delivered to the merchant in England under what bond is it?—Of course, it is in the merchant's hands them.

17149. Has it left the bond?—It has left the bond then.

17150. Will you take it that it has now got into the hands of the merchant?—Yes.

17151. Of what use do you say that the French guarantee is then?—That it has been Cognac brandy.

17152. When it is in the hands of the merchant what protection has the person who purchases by virtue of that guarantee?—The merchant cannot alter it.

17153. But he can alter the commodity?—He can alter the commodity, but it is at his own risk, and therefore you have the Food and Drugs Act to go upon. If you have got the Food and Drugs Act to go upon surely an expert can tell you whether the commodity has been tampered with.

17154. Is it your object to protect the consumer?—Yes, my object is to protect the consumer.

17155. When it has got into the hands of the merchant in England what is the protection to the consumer beyond that which is given at present by the Food and Drugs Act?—The protection to the consumer is that if you stop all plain spirit, or all admixtures, what I call mixtures of grain spirit, anything that is not grape spirit, from coming into the country the merchant has nothing else but grape spirit in his place.

17156. Why cannot the merchant introduce British brandy and pass it off as brandy from Cognac?—Because if you put alcohol into a pure brandy it can be immediately detected.

17157. By taste?—Yes. I would detect it in two minutes.

17158. Cannot that be done now?—Unfortunately, a great quantity of the stuff that is imported now has got it in.

17159. How did they get a conviction under the Food and Drugs Act in the Islington case?—We will not go into that Islington case now, if you please.

17160-1. Indeed we will?—If you go into that Islington case you come into increased fraud at once.

The witness withdrew.

Mr. Richard Francis Nicholson, re-called.

17162. (*Chairman.*) You have been examined before as a witness on this Commission?—Yes.

17163. You are a director of Nicholson and Co., Limited?—Yes.

17164. They are rectifiers and compounders?—Yes.

17165. Your trade is a good deal in British brandy, is it not?—Yes, we have a large trade in British brandy.

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17166. What is the manufacture of British brandy? Is it manufactured here?—It is manufactured in England.

17167. From what?—From alcohol made from corn and then flavoured and compounded to suit the public taste.

17168. With whom do you deal? Do you send it direct to the public-houses, the licensed victualler?—In some cases in London, but principally to merchants in the country.

17169. How do you describe it?—As British brandy.

17170. Openly and in terms?—Openly, and it is permitted as "B. B."—British brandy.

17171. Is it known to the public as British brandy?—Yes; it is a recognised article of commerce.

17172. As far as you know, is there anything objectionable in it as regards health?—I do not know of anything objectionable. I have never heard of it as at all detrimental in the way of health; in fact, it is made from a pure spirit.

17173. What do you say as to the comparative price?—The prices vary. Our British brandies run from 5s. down to 2s.

17174. Of course, that is cheaper than the French brandy?—A good deal of the foreign brandy is sold in this country as low as 2s. to 2s. 6d.

17175. Not Cognac?—No, not Cognac; it does not compete with Cognac at all.

17176. Is your brandy mixed at all with the foreign brandy?—Some sorts are, but not all of them. There are various degrees of brandy we sell.

17177. Are they sold as mixed brandies?—As British brandy.

17178. Mixed with French brandy?—Yes.

17178*a*. Is there any proportion of the mixture of French and British brandy that would constitute British brandy?—None whatever. I take it that any mixture would be British.

17179. Is there anything else you would like to explain to us about your brandy? Certain matters have been referred to us. First, "whether in the general been referred to us. "First, whether in the general interest of the consumer, or in the interest of the public health, or otherwise, it is desirable: (a) To place restrictions upon the materials or the processes which may be used in the manufacture or preparation in the United Kingdom of"—certain spirits. As to your British brandy, what do you say? Do you think it is desirable that any further restriction should be placed upon the materials or the processes which may be used?—I think it is unnecessary to place any further restrictions than obtain at present on the materials or processes used.

17180. There is some restriction by the Act of 1690?—By the Act of 1690.

17181. The old Act?—Yes, and afterwards by the Act, I think, of 1860.

17182. The restriction is that it shall be made of spirit derived from corn?—Yes.

17183. The next thing that is referred to us is "To inquire and report whether it is desirable—(b) To require declarations to be made as to the materials, processes of manufacture, or preparation or age of any such spirit." What do you say to that?—I do not think it is necessary to do so.

17184. And "(c) To require a minimum period during which any such spirit should be matured in bond." Does British brandy improve much by keeping?—I think all spirits improve to a certain degree by keeping.

17185. Does your price increase with the age of the spirit?—If it was kept a long time there would have to be a higher price. We should have to charge a larger price.

17186. That is interest on money?—Yes; but I do not think there would be such a marked improvement in the article as to warrant the detention in bond.

17187. As to whether it is necessary to extend any requirements of the kind mentioned in the two subdivisions immediately preceding to any such spirit imported into the United Kingdom, I think you say that no change is necessary?—That is so.

17188. What is your definition of "British brandy"?—I suggest: A British compounded spirit, partaking of the nature and flavour of the brandy made in a similar way and from similar materials abroad.

17189. That is your definition?—Yes.

17190. Is there anything else you would like to mention to the Commission?—That British brandy does not compete with Cognac. It is an article made to compete with, if you like, the imitations of Cognac brandy; it competes with the *eau-de-vie* that is sold in France generally, the brandy that is sold in Germany and also in Belgium. It is that class of brandy that British brandy competes with. I have noticed in some of the previous evidence certain misconceptions. One is that British brandy has only been in use in this country for comparatively speaking a few years, chiefly since the phylloxera, whereas British brandy has been made even before 1690, and in some of our old books I have come across British brandy being sold to the Government, to the victualling yards in 1745 in large quantities. Again, in 1765, I find there was a large export of British brandy, principally to America and the Colonies. I find, too, that the price was very little more than the price of the plain spirit of that day. So it has undoubtedly been recognised for many years as a legitimate article of commerce. At present it must be made by a licensed compounder, a man who is liable to have his stocks inspected and checked by the Excise.

17191. Under what statute is that?—Under the compounding. It is a British compound.

17192. (*Dr. Adeney.*) Are the stock of flavouring materials under Excise control?—They can always take samples, but the actual details of flavouring are always considered to be a trade secret, and the Excise keep it in a separate category, as I said before, the permits being marked "B. B.," which stands, of course, for British brandy.

17193. (*Chairman.*) That is the old Act?—The existing one.

17194. And that was the old Act, too?—Yes, that was so. It was "B. B." in old days.

17195. Is there anything else that occurs to you that you would like to bring before the Commission?—We claim that British brandy is one of the varieties of brandy, and that it is very unfair for certain people to try and read into the word "brandy" merely Cognac. Abroad *eau-de-vie* is recognised as being different from Cognac, and we claim that some definition ought to be allowed in England.

17196. That you call yourself British brandy?—Yes, and we claim that it is a variety of brandy, and that it can be sold as brandy.

17197. But, as a fact, you do sell it as British brandy?—Yes, as a fact we do sell it as British brandy—that is, the merchants do. It is the merchant's business to sell it as British brandy.

17198. Is there any objection made to your using the word "brandy" in connection with British brandy?—No, but we claim that our customers are entitled to sell it as a variety of brandy. It is one of the varieties of brandy.

17199. Why?—Simply because people ask for brandy for short. They will not take the trouble to ask for any particular brandy.

17200. Do you think when they ask for "brandy" they intend to get British brandy?—A few who ask would want foreign brandy, but the majority would mean brandy alone.

17201. I should have thought not, but you, of course, know better?—That is our claim.

17202. (*Dr. G. S. Buchanan.*) As a fact the bulk of it is sold as brandy without any qualification?—A great deal of it is bottled, and sold for cooking purposes.

17203. With the word "brandy" outside?—"Brandy," or "Imperial brandy," or some phrase of that sort.

17204. In the case of the publican it would be sold as brandy, I suppose, would it not?—I should think it probably would, but I cannot answer for them.

17205 (*Mr. J. Y. Buchanan.*) But it could not be called "Cognac," I suppose?—No, it has no right to the word "Cognac."

17206. (*Dr. G. S. Buchanan.*) Is the British brandy that you have been speaking of—the corn spirit which

has been compounded and meets the public taste—brandy without any grape origin at all?—Unless some grape products are introduced in the manufacture either in the form of old foreign brandy being added, or oils manufactured from the marc.

17207. Generally can you compare the flavour of that brandy at all to Cognac?—I have shown some of our samples to brandy manufacturers in Cognac, and they have been surprised to hear that it has been manufactured in England. They believed it to be absolutely foreign brandy. I have brought samples with me.

17208. The object of compounding really is to get something near that taste?—Exactly, to please the palate.

17209. (*Dr. Adeney.*) Is it to imitate the taste of *eau-de-vie de vin* or Cognac?—It is to compete with them, certainly.

17210. But that is not quite an answer to my question?—I cannot tell you. My experience of the various varieties of *eau-de-vie* is very limited; I have seen a great many, but I cannot speak conclusively.

17211. Is the object to imitate the flavour?—To give it a brandy flavour.

17212. Of foreign wine spirit?—Yes, certainly.

17213 (*Dr. G. S. Buchanan.*) We have heard a great deal mentioned of essences, oils, and so forth. I suppose the main point in making these British brandies from a rectified corn spirit is that you have to add the proper essences and oils—I call them that, but if there is a better word than that I should like to know what it is?—In our case it is only two out of five samples where any oils are added at all. In the other three cases the flavour is procured and brought out in other ways.

17214. The other ways would not be covered by the word "essences"?—Not at all.

17215. You would not care to go further than that as to giving us an indication of the kind of compounding?—No, I cannot describe it more exactly than that.

17216. You told us when you were here before that what is used for the compounding is very particularly a trade secret of the compounder?—Yes. Every firm has its own idea of what to use.

17217. I think I put it to you then, and perhaps I may put it to you again now, do you disclose to the Excise officers or to any other persons what materials are used in these compounded spirits?—We do not, but when they ask for samples we supply them with them. I have done that.

17218. (*Dr. Adeney.*) Have they any right to ask unless, of course, they are alcohol extracts?—I do not know what their powers are, but they have asked for them.

17219. May I take it that these are all alcohol extracts? If I take it that they are they would come under the cognisance of the Excise?—I cannot answer that question. I do not know quite.

17220. (*Dr. G. S. Buchanan.*) You are under no obligation to satisfy any public authority, or public health authority, on demand as to the wholesomeness of these articles on compounding?—There is nothing unwholesome in them.

17221. That is your belief?—Absolutely.

17222. But there is no control for that purpose?—I do not think so.

17223. I gather your British brandy, as so made, may be mixed with foreign brandy?—Yes.

17224. And that gives what you would regard as a better quality brandy, does it not?—It depends entirely on the foreign brandy employed.

17225. You have various grades?—Certainly.

17226. Some contain grape and some not?—Yes.

17227. Does that include Cognac? Do you blend with Cognac?—If we use any foreign brandy we only use Cognac.

17228. The wine spirits from other origins are of no use to you, are they?—We do not think them good enough for the purpose.

17229. I understand you compete with Hamburg brandy and German brandy?—Yes, and French *eau-de-vie.*

17230. Can you tell me, as regards the Hamburg brandy, whether it is the same general character as yours?—We understand it to be so—made from corn.

17231. That is sold as brandy equally with yours?—That is sold as foreign brandy.

17232. Do you export any British brandy?—We may have done occasionally, but I do not know of a single case within the last ten years.

17233. Is your similarity to Cognac so pronounced that you can take in the expert taster?—I cannot answer for the expert taster.

17234. (*Mr. J. Y. Buchanan.*) In the making of your British brandy do you ever distil raisin juice?—No, never.

17235. Or raisin wine?—No, nothing of that kind.

17236. So that it does not in that way get any grape spirit?—No, certainly not.

17237. British wines, I suppose, are made very much from raisin juice?—We are not makers of British wine, so I do not know. I have no knowledge.

17238. (*Dr. Bradford.*) I gather from your statement that British brandy varies in price from 5s. to 2s.?—It does in our case.

17239. Would it be fair to ask what that difference in price depends upon?—The expense of the process the spirit has been through, and the costs of the ingredients.

17240. I do not know whether it is a fair question or not, but as regards alcoholic strength how does British brandy compare with Cognac?—I think most British brandy is made at proof like Cognac abroad, and is probably sent out to the customer at 17 or 25 under proof in the same way as foreign brandy would be in bottle.

17241. What would be your definition of "brandy"? I gather that you consider that British brandy is entitled to be called brandy?—Yes, by Act of Parliament.

17242. What would be your definition of "brandy"?—I rather look upon the word "brandy" as in old days, meaning any spirit. Many things were called "brandy" which were not, as we understand Cognac to-day, and as time went on the grape spirit in France was more and more improved, and got more and more into circulation and popular favour, and to a certain extent has monopolised the word "brandy; but there is nothing in the word "brandy," as I understand it—"brandwine"—to show that it must be all grape spirit.

17243. Even when it is quite unqualified?—I do not think so. Corn brandy is a most common thing.

17244. That is qualified?—Yes.

17245. (*Chairman.*) Do you say that any spirit, any liquid, or any product coming from corn is entitled to be called "brandy"?—I think a hundred or hundred and fifty years ago any spirit would have been called "brandy"; in fact, spirit produced from rice arrack was very often called "arrack brandy" as a variety of brandy—that was grain spirit in those days.

17246. Could you apply it now to anything that comes from grain?—Now it has a particular flavour of its own which is identified with it.

17247. That is the French flavour?—Yes, that is the French flavour, and I think anything with that flavour is entitled to the word "brandy."

17248. You make it a question of flavour?—Yes.

17249. And you must get that flavour?—Yes.

17250. (*Dr. Bradford.*) You mean that there must be some products of the grape juice?—Some nature and flavour that we associate with Cognac brandy.

17251. That is to say, some products of the distillation of grape juice wine?—Yes.

17252. (*Chairman.*) You cannot get the flavour without, can you?—Yes, I think so.

17253. (*Dr. Bradford.*) How? I want to be quite clear about this?—I think you can get the flavour, but I do not think that flavour need necessarily be derived from the grape. I would say the nature and the flavour, not merely the flavour.

17254. What I want is not under what conditions the word "spirits" has been applied in the past, but to what spirits you think the term "brandy" may be applied now?—To any spirit having the nature or flavour similar to the brandy produced at Cognac.

Mr. R. F. Nicholson.

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17255. (*Chairman.*) How, then, is that nature and flavour produced? Can it be produced without the juice of the grape?—Yes, I think so.

17256. By imitation?—Yes, by imitation. I have had samples brought to me of the flavour produced entirely from the leaves of the vines. As far as I can understand, it is not the juice or the flesh of the grape which gives the flavour, but it is the bloom on the grape and on the leaf, the mould, or the fermenting power which is natural to all vegetables, that really give the flavour.

17257. (*Dr Adeney.*) Do you say it is the yeast that produces the fermentation?—I have had samples sent to me where the flavour has been produced absolutely from the leaves.

17258. Is that by fermentation?—Yes, by adding it in fermentation.

17259. (*Dr. Bradford.*) Have you ever seen a specimen which had its flavour derived from any other substance than some part of the vine? Is it essential that it should be something of the vine, whether the leaves, or the bloom, or what not?—I think so, but I am not quite sure about that.

17260. (*Dr. G. S. Buchanan.*) Is the grain spirit that you told us about, on which you gave evidence with regard to whiskey, the same as that used in connection with brandy?—After it has been treated specially for the purpose.

17261. Does that involve additional rectification?—It involves a form of rectification.

17262. Even in the case of mixtures with foreign brandies?—Certainly.

17263. (*Dr. Adeney.*) What, precisely, do you mean by that expression that I noticed you used—"Nature"?—Style and character.

17264. It is nothing to do with composition?—To a certain degree, but not entirely composition.

17265. I do not know that you now give me any clear idea of what you mean?—You ask me a very difficult question.

17266. I know it is a difficult question, but I was wondering whether you, from your experience, could give a definite indication to my mind of what you mean by the word "Nature"?—The style and character, judging by taste.

17267. Taste alone?—Yes.

17268. So that "nature" is simply a redundant use of the word "flavour"?—Yes.

17269. It really has not very much meaning in it?—That is so.

Adjourned to to-morrow at 12 o'clock.

THIRTY-FOURTH DAY,

Wednesday, 24th March, 1909.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Mr. R. C. W. Currie.

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Mr. REGINALD C. W. CURRIE, called.

17270. (*Dr. G. S. Buchanan.*) Are you the Managing Director of Messrs. Tanqueray, Gordon and Co., Limited?—Yes.

17271. Are they rectifiers and compounders carrying on business in Goswell Road, London, E.C.?—Yes.

17272-3. You kindly offered to give us evidence with regard to British brandy. Will you tell us what British brandy is? Can you define British brandy?—British brandy is a British compound spirit partaking of the nature and flavour of foreign brandy.

17274. Did you hear Mr. Nicholson's evidence yesterday?—Yes.

17245. There is a slight difference between what you say and what he said. I think Mr. Nicholson gave us to understand that the flavour that he desired to put into British brandy was that of Cognac brandy?—To get the flavour in, but not Cognac brandy. We do not put that in the same category as British brandy.

17276. That I understand; but the point Mr. Nicholson made was that foreign brandy was a very general sort of term and might cover a good number of flavours; that the flavour that was aimed at as the standard flavour was Cognac?—Yes, exactly—the standard flavour.

17277. You do agree with that?—Yes, quite.

17278. Then with regard to the origin of the spirit that you use to make British brandy. What is that?—Corn spirit.

17279. Do you buy that?—Yes.

17280. You do not make it?—No, we do not make it.

17281. Do you get it entirely from England or do you get it also from Scotland or Ireland?—No; ours is entirely from England.

17282. Have you in previous years obtained any grain spirit from Scotland and Ireland?—No, not from Scotland or Ireland.

17283. Is that because of any essential difference, or is it mainly a question of price and convenience?—We have our own friends in the trade, and we find it is more convenient to us to buy London spirit than to buy it from Scotland or Ireland.

17284. The raw material is essentially a grain spirit?—Yes.

17285. Then in order to make British brandy you add what?—In some instances we have a certain amount of foreign brandy which we add to it according to the price of the article.

17286. And in other cases?—In other cases it is essences. Most of it contains—in fact, nearly all of it contains a certain amount of brandy. It is a question of price and quality.

17287. I see in various lists of essences that we had produced Cognac oil frequently figures. Is that an essential for British brandy sold in that way?—Cognac oil is used in British brandy, certainly.

17288. The ingredients used in flavouring I suppose are fairly numerous, are they not?—Yes.

17289. I think Mr. Nicholson told us before that they are regarded as very special secrets by the compounder?—Yes.

17290. You would not care to state what the circumstances are?—No, I would rather not.

17291. Would you have any objection to stating them if there was an inquiry by a properly accredited officer as regards the wholesomeness of these spirits if he wanted to know what materials were used with a view to seeing whether anything deleterious came into the composition?—We have never been asked.

17292. But if you were asked by some representative of a Government Department, for example, would you say?—We should say that there was nothing injurious about it.

17293. No doubt, but would you be prepared to give the information—not for publication, of course?—I do not know what powers the Government have to make us do it. We should not do it voluntarily.

17294. You would not do it voluntarily?—No.

17295. Can you tell us in your business to whom you consign the British brandy? Do you sell it in bulk?—We sell it in bulk.

17296. You do not bottle?—We do not bottle.

17297. Do you send it to wine and spirit merchants?—Yes.

17298. And to grocers?—We do not supply grocers ourselves.

17299. The grocers who receive British brandy would receive it through an intermediary?—Probably some other manufacturer would supply the grocers. We do not ourselves supply grocers.

17300. Then in what terms do you send out your British brandy? How do you describe it?—As "BB"—that is on the permit as well as the invoice.

17301. "BB" has a well-recognised significance in the trade, and it means British brandy?—Yes.

17302. You say you put it on the permit? Is that because you are obliged to put it on the permit?—Yes, according to the Excise regulations and laws. It goes in a different column altogether from the foreign brandy.

17303.. Is British brandy distinguished by the Excise from other compound spirits?—Yes.

17304. On the invoice, of course, you are under no obligations to describe it as "BB." You need not use the Excise term, but as a matter of fact you do use "BB"?—As a matter of fact we do, certainly.

17305. Your customers, therefore, in all cases know that it is British brandy?—Yes, They are bound to do that from the permit.

17306. Do you know whether the designation "British brandy" is passed on to the consumers by the retailers?—No, I cannot say that.

17307. Would you agree with Mr. Nicholson, who told us yesterday that he considered that it need not be passed on, and that the retailer would be entitled to call it brandy without any qualification?—Certainly.

17308. You would agree with that?—Certainly.

17309. Do you think the consumer who got your British brandy when he asked for brandy would know the difference between that and French brandy?—It depends on the person and what the other foreign brandy was. He would certainly know the difference between Cognac brandy and anything like that.

17310. You think it would be quite distinct from Cognac brandy?—Oh, yes. We do not put it absolutely as Cognac brandy.

17311. You would not go so far as Mr. Nicholson, who made a Cognac brandy that was very difficult for the Cognac people to distinguish?—Oh, quite, I think in the case of our high-class brandy it would be very difficult to distinguish between that and Cognac.

17312. But that would be a mixture that had Cognac brandy in it?—Yes.

17313. With what imported brandies other than the French Cognac brandies does your British brandy compete?—Most of it is made with Cognac brandy. It is a question of quality.

17314. Besides this grain spirit that is prepared as brandy in this country there is also, is there not, imported spirit which is of very much the same nature?—Oh, yes.

17315. What is called Hamburg brandy. Is that generally of that type?—Yes, I suppose you would call it of the type of British brandy.

17316. Is it essentially a grain spirit or a beet spirit?—That I cannot tell you.

17317. If British brandy competes with foreign grain spirit which has been treated in a similar way would the foreign grain spirit get an advantage in the market simply from the fact that it is foreign?—Some people now might prefer to buy foreign spirit in preference to British brandy, especially on the question of the lawsuits which have been going on. That is the only reason, I think.

17318. I do not quite see how that would help them?—I suppose from the fear of a certain amount of prosecution. That is the only way.

17319. But is there not a similar fear of prosecution in the case of British brandy sold as brandy?—I do not quite follow you.

17320. I will put it in this way: that you claim the right to sell British brandy as British brandy?—We claim the right to sell British brandy as coming from us. It is designated as "BB."

17321. But you claim for your retailers the right, or you think the retailers should have the right, to sell it as brandy?—Quite so.

17322. Have any retailers of British brandy to your knowledge been prosecuted because they sold it as brandy?—I believe there was a case in the papers of a prosecution the day before yesterday.

17323. If you invoice the brandy as British brandy and call it British brandy on the permit do you see any objection to that term "British" being passed on to the consumer?—I do not see any reason why it should be passed on, because we maintain it is brandy.

17324. What effect do you think it would have on the trade if British brandy had to be called British brandy?—I think it would lessen the trade and injure it.

17325. Even if it was applied all round to the German and Hamburg brandy, and it was said that that was to be called grain brandy?—I do not see, owing to the different way in which the brandy from abroad is made, how it would quite work here. It would be a difficult thing.

17326. I have taken you rather away from the *précis* of your evidence. You wish to say that the British brandy is in your opinion already a pure spirit?—Yes.

17327. I presume with regard to age you would repeat what you have said before with regard to compounded spirits, that you consider ageing unnecessary?—Quite.

17328. And that if an age limit were imposed foreign spirit should be treated in the same way as the British? That is your contention?—Yes.

17329. (*Dr. Adeney.*) I do not know that I quite understand what you mean by foreign brandy as you refer to it in the *précis*. Do you mean foreign fabricated brandy?—Yes, not Cognac brandy.

17330. Do you wish to include under foreign brandy wine spirit?—No.

17331. Flavoured industrial spirit—may I put it in that way?—No, ordinary foreign brandy.

17332. Is that always fabricated brandy? I mean neutral spirit flavoured artificially?—I cannot tell.

17333. You just told me you do not include under foreign brandy wine spirit?—We do not include Cognac brandy.

17334. But there are other brandies than Cognac which come exclusively from wine spirit?—Yes.

17335. Do you include under the term "foreign brandy" wine spirit?—Yes.

17336. All brandies other than Cognac?—Yes.

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17337. Do you think it is quite fair to say that artificially flavoured spirit can be of the same nature and flavour as a wine spirit? From the very nature of things can it be the same nature?—I think it can be.

17338. It can be imitated, of course, but can it be exacty the same nature?—I do not say it can be absolutely the same nature.

17339. (*Dr. Bradford.*) Have you any experience of the use of capsicum as a flavouring agent in British brandy?—No.

17340. You have never heard of it?—No.

17341. (*Chairman.*) You may scarcely know this yourself, but what is your idea? When the publican is asked for brandy he may have two qualities. He may have a little Cognac brandy and he may have some Midi brandy or a British brandy. Does he sell them at one price?—No, I should say certainly not.

17342. You think he would charge more for the Cognac?—Certainly.

17343. How is it generally served? If a man asks a publican for brandy does he get a wineglassful, or how does he get it?—I do not know that.

17344. I will not ask you what "BB" is actually composed of in detail, but is there anything according to your view deleterious to health in it?—Oh, dear no, certainly not.

17345. Supposing a medical man prescribed it as medicine, as many old people have to take brandy, do you think your "BB." would be as sustaining—call it a medicine or call it a liquid—as the Cognac brandy?—It would do as much good from a medical point of view as far as I understand as Cognac, that is to say, the spirit which is in it, which is the essential thing. But I should not really like to go into that.

17346. One hears that brandy is a very sustaining element of food for very old people. Do you think there is as much merit in your British brandy as there would be in Cognac for that purpose?—I should not like to say.

17347. At any rate, you would not like to say no?—No.

17348. (*Dr. G. S. Buchanan.*) You have told us once or twice there is nothing in the British brandy, none of these essences and things, which is deleterious to health. At the same time, for obvious reasons, quite reasonable trade reasons, you do not wish to state what any of these materials are, and we are rather asked to accept it on your authority. Could you give us any sort of indication of any steps you have taken to see that these articles are wholesome? Have you had any opinion with regard to them? You use a very large number of essences and extracts of one kind and another?—Yes, we do.

17349. Have you any knowledge as to their character?—Whatever we buy we buy of the best quality.

17350. They are the best quality, and that is as much as you know?—That is as much as we can possibly know, I think.

17351. But a drug may be of the best quality—the best arsenic, for instance?—Quite so.

17352. (*Mr. J. Y. Buchanan.*) I suppose these drugs that make up the flavouring essences, although you do not wish to tell us what they are, are all perfectly well known and have been studied in their physiological effect?—Oh, yes.

17353. So that you can form a perfectly good judgment as to the effect that they would have?—Yes. Most of our British brandy is made up of brandy itself.

17354. But the flavouring?—Yes, quite so.

17355. You are not using anything with regard to the origin of which you are in doubt?—No, certainly not.

17356. Have you ever had any complaints of the unwholesomeness of your brandy from your customers?—None whatever—never since we have started business.

17357. I suppose if there was anything of the kind on the part of the consumers, if they found it was unwholesome, it would come back to you through the middleman to whom you sell your brandy?—Very quickly, I think.

17358. (*Dr. Bradford.*) Could you tell us as regards these essences, whether they are substances derived from plants?—I cannot. I am afraid that is rather beyond me.

17359. As regards the virtues that brandy is said to possess, would you attribute that entirely to the alcohol in the brandy?—I am afraid that is rather beyond me.

17360. You would rather not express an opinion on that?—I would rather not.

17361. (*Chairman.*) The Commission are much obliged to you for your evidence.

The witness withdrew

Mr. L. Gordon.

Mr. Luis Gordon, called.

17362. (*Dr. Cushny.*) You are the agent of the Spanish firm of Peter Domecq of Jerez de la Frontera, Spain?—Yes, for Great Britain only, and so far as concerns their brandy business only.

17363. What is your address?—I carry on business at 43 and 45, Great Tower Street, E.C.

17364. You have been in the trade for a long time?—Many years.

17365. Exclusively for this firm?—No. I used to ship sherries in past times, and then I have been for some years with this firm travelling abroad, and now I am representing them here in England.

17366. Can you tell us how Spanish brandy came to be put on the market?—About the year 1866 Don Pedro Domecq, who was then the senior of the house, had an order from some large corporation in Europe for a quantity equal to about 500 butts of wine spirit distilled in the best way, stored in the best wood, and so on, with certain conditions. Don Pedro Domecq undertook to execute the order, and accordingly got the necessary stills and put up a distillery at great expense, executed the order, and when the samples were shown to the firm they were reported as in fact so good that they almost surpassed their expectation. But about the price there was a difference, and Don Pedro Domecq, not wishing to give way in what he considered the fair value, annulled the contract and stored these 500 butts. A few years afterwards he found that this spirit was excellent brandy, and had developed into an excellent brandy for consumption. That was the origin. The distilling was then recommenced, and has been practically continued without interruption up to now.

17367. Where was this brandy made?—I was just coming to that. At the beginning Mr. Domecq began to place his brandies in different markets, including the English market, in bulk as well as in bottle; but he found later on that a brandy sold in bulk was never sold or seldom sold as Spanish brandy but mixed or blended with other brandy. His son, the Marquis de Casa Domecq, who is the present senior of the house, continued shipping this brandy in bottle almost entirely with their name, and special bottles and special marks. Then they found two districts in Spain where they considered the grape, the climate, etc., were just the right thing for producing the brandy, and they accordingly started and built a distillery in La Mancha and another in Malaga, which is the South of Spain.

17368. Then they simply distil brandy? They have not any other business?—It is a very old house established in 1700 and something, and it is a very large sherry house.

17369. What materials are used for making this brandy?—In all cases within my knowledge and without exception in the distilleries of Pedro Domecq they only use the fully fermented wine from fresh grapes. That part of Spain is a large producing country for grapes.

17370. Are there any other brandy distilleries in other parts of Spain?—Yes, in many parts of Spain, including Malaga and also La Mancha, and there are also other firms in Jerez de la Frontera.

17371. Do you think those other firms use exclusively grape wine?—Of course, I can only answer for my house, but I should say only because there is a very strict law in Spain.

17372. You say that all Spanish brandy is grape brandy?—I should say so.

17373. Can you tell us anything about the stills?—I sent with my *précis* of evidence a photograph of the stills they use there, which are from Charente.

17374. Are they of the type known as the pot stills?—Yes.

17375. The simple pot stills?—Yes. They distil from the Premier Jet, and then of course discarding the head and tail and putting it in again.

17376. Is it the pot still with a rectifying head?—No, there is no rectifying head. It is a pot still or Premier Jet.

17377. (*Dr. Adeney.*) Similar to the Charente stills?—Yes. I can explain to you what I mean if you wish me to. I will take a note of it.

17378. We have had a description of the Premier Jet. Then when the brandy is made what is done with it?—It is usually stored for two or three years; but in this case of Messrs. Domecq they always have it for five years in their store, and then they put it into bottles from five years upwards according to the marks. They do not sell by vintage; they sell by marks. They begin with five years, and after five years in wood they put it in bottle, which is their first mark, and then they go up to the oldest.

17379. That is your particular firm. Is all Spanish brandy kept for four or five years, do you suppose?—Anyhow, for over two years I can answer for.

17380. What is your definition of brandy?—I think brandy should be the spirit distilled from the juice of the grape—from the wine of the juice of the fresh grape.

17381. You would not admit any admixture of anything with it at all?—No.

17382. Would you limit the form of still at all?—I do not think it is necessary to limit the form of still to be used, for, although a wine spirit distilled by a patent still might be so rectified as to be neutral spirit, and by this losing all right to be called brandy, yet I do not think anyone would be so foolish as to put good material and expensive wine through a patent still to bring out some neutral spirit which is of much less value.

17383. You would not refuse the term to the distillate even from a patent still?—I do not think it is necessary to take any trouble about limiting it, because, as I say, I do not think anyone would put good spirit through a patent still which will take all the characteristics and all the goodness out of the wine.

17384. But supposing they put a poor wine through a patent still and got rid of all its newness, would you call that brandy then?—Of course, I am not an expert in distilling, but I understand it takes all the goodness out of the wine, and by doing that it takes away the characteristics of the brandy.

17385. But you would still call it brandy?—I would call it neutral spirit. Brandy, I understand, must have a special taste, and certain vinosity and certain style.

17386. You would not limit the form of still, but you would determine whether it is brandy or not simply by taste?—I think so.

17387. Now, with regard to the bonding or the keeping of brandy?—I do not consider that a minimum period in which brandy should be matured in bond is necessary, because first of all I believe young brandy is perfectly wholesome, and the younger it is the cheaper it is. Of course, it makes it more available to the poorer classes. All these firms keep it in bond over here for a certain time, as I said before, but I think the older it is the better flavour it has, and it is more pleasant like all wines.

17388. It is quite wholesome when young?—Quite wholesome. That I have always understood.

17389. Would you suppose it has the medicinal virtues when young that it is said to have when old?—I should say so.

17390. Has the Spanish Government found it necessary to define brandy in any way?—They have a very strict law to protect the purity of the brandy, the wine spirit, and the industrial spirit; very strict, indeed. I could not tell you how it is put in force, but I have written to my friends there to send a copy of their law in case it would be of use to the Commission.

17391. We have heard of the French regulations, and we should like to have the Spanish ones?—Yes, I do not know how they proceed to put it in force.

17392. (*Dr. Bradford.*) I understand that the brandy of your firm is at least five years old?—Yes.

17393. During that five years it is stored in wood, is it not?—Yes.

17394. I presume you sell some very old brandies?—Yes, very old.

17395. Are those old brandies stored in wood?—They are stored in wood. I could not tell you the exact number of years, but they are.

17396. The brandy is not bottled off at the end of five years?—It is bottled off at the end of five years for one mark, which is our Monopole brandy, and then for the better marks it is after 12 years and after 15 years, but until then it is kept in wood.

17397. Do you think that brandy improves at all if it is kept in bottle? If you put a five-year-old brandy in bottle and keep it in bottle for ten years would that compare with the brandy that had been in wood for 15 years?—No, I think it improves more in wood because there is more evaporation than in bottles, unless there is evaporation through the cork, which must be very small.

17398. What do you think is the peculiar change that takes place with age? Is it a question of flavour?—It is by evaporation of certain essential oils.

17399. But is the improvement in the brandy merely an improvement in flavour, or is it from other changes?—My private opinion is that it improves in flavour, but of course I am not prepared to explain it, because I am not expert enough.

17400. It alters greatly in flavour and taste?—Yes, it gets very much softer, and I think there is more *finesse*, and otherwise there is more price, too. If it was exactly the same I do not think we would get more price for it.

17401. I take it an expert can detect the difference between a new brandy and an old brandy by flavour?—I should say certainly.

17402. How do the Spanish brandies compare in flavour with the French brandies in flavour, and so forth? Are they really distinguishable?—I have had, in my experience, a blindfolded competition on several occasions, and I have had these brandies selected by experts, and they were surprised when they found they were Spanish brandies. They said they did not know.

17403. You mean an expert could not distinguish?—They were surprised to find after the brandy had been selected in competition that it was Spanish, which shows that it compares with the French brandies, and that there is not very much difference.

17404. You are talking of a comparison with French brandies?—Yes.

17405. (*Dr. G. S. Buchanan.*) Does this Domecq firm export to this country a large proportion of the total Spanish brandy that comes here?—I could not say, because, as I said before, they almost entirely ship in bottles and cases, while of course there must be a great quantity of brandy shipped in bulk.

17406. I see from the Customs returns that the exportation of brandy from Spain has been diminishing within the last few years?—Quite so.

17407. Does it apply to the bottle trade?—No, not to the bottle trade. The bottle trade was never known much or dealt in in this market until lately. Those figures apply to the bulk.

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17408. Is your bottling done in Spain?—Yes.

17409. Have you any specimens of the labels that you put on?—I have not one here. We keep it entirely to the characteristics. We have a Monopole which is the first, and then instead of having Star 1, Star 2, Star 3, and so on, we have vine shoots. There is a little sign of a small vine, and then two vines, and three vines, and so till you get to the very finest which is the oldest.

17410. But as regards any statement on the label which signifies what the spirit is sold for, do you use the word "brandy" or the words "Spanish brandy?"—I do not think we do. We put "Pedro Domecq, Jerez de la Frontera, Spain." I do not think we put "brandy" at all.

17411. You do not use the word "Cognac?"—Oh, no. We keep it entirely different, and, in fact, the bottles are entirely different from those of Cognac.

17412. How is it catalogued?—As Spanish brandy—"Pedro Domecq Spanish brandy."

17413. (*Dr. Adeney.*) Is there no designation on your label to indicate that it is brandy?—Oh yes, there is the guarantee of the house and so on—"Pedro Domecq of Jerez de la Frontera."

17414. How is it designated on your label?—"Pedro Domecq" three vines or whatever it is, "Jerez de la Frontera, Spain."

17415. Is the word "brandy" on your bottles?—I am not sure whether we say "Spanish brandy" or only "brandy."

17416. It may either be Spanish brandy or simply brandy?—Spanish brandy. We of course mark it as Spanish brandy. I do not know whether on the labels we mention it at all.

17417. You put in the word "Spanish"?—We put "Jerez de la Frontera, Spain." I do not know whether we say "Spanish" or "Spain."

17418. But the word "brandy" is on the labels?—I think it is.

17419. (*Dr. G. S. Buchanan.*) Can you tell us whether Spanish brandy is sent to the Cognac district in France to be blended with others?—No, I could not tell you that. I am only the agent for Great Britain and the British colonies.

17420. Have you had experience in your business of other brandies? Do you deal in other brandies as well?—No, only in this Domecq brandy.

17421. Can you give us any indication as to price?—They are high class prices. They are not cheap brandies.

17422. They are like the better class of Cognac brandies?—Yes, a very high price.

17423. (*Dr. Adeney.*) Have you had occasion to have brandy analysed?—Yes.

17424. Could you give us the analysis?—I sent it to the "Lancet."

17425. Have you it in any form that you could supply to the Commission?—This is an extract (*producing document*) I think that gives the result of the analysis.

17426. (*Dr. G. S. Buchanan.*) It appeared in the "Lancet" of Januuary 5th, 1907?—Yes.

17427. (*Dr. Adeney.*) Does the brandy imported into this country come with a permit?—Messrs. Domecq have now built up a very large trade not only in Spain where they have almost a monopoly, but also in North America and Central America and South America, and in Russia and Germany they have a nice business. Now we are introducing it to the British market where it has been very favourably taken indeed.

17428. I suppose your brandy is imported into this country with the Spanish Excise permit?—Yes, they have a very strict law.

17429. Could you give us a copy of that?—I have written for one and shall be pleased to supply it to the Commission.

17430. I think that accompanies the goods to this country?—I do not think there is one now, because Spain is a recognised wine producing country, so I do not think they want it now.

17431. (*Mr. J. Y. Buchanan.*) You have a considerable acquaintance with Jerez de la Frontera?—Yes.

17432. Have you been long there?—I am a native.

17433. You are quite familiar with the method of wine production and spirit production?—Pretty well.

17434. You say in your *précis* that the brandies are not sold by vintages but by marks, that is to say, in the same way as the wine?—Yes, they make a solera.

17435. They make it up to a style?—Yes.

17436. Do you do that with the brandy also? Is it the custom to supply a brandy of a certain style as it is to supply wine of a certain style?—I should say so.

17437. And are the brandies of the same character put each year into the same casks in the Bodega?—I think so. You can make it up to the mark the same as you can keep to a certain style of course according to age.

17438. Are they in the habit of storing the brandies in open casks like the old wine solera casks which have a certain amount of very old wine in them?—Yes.

17439. There is some sort of accumulation?—Yes, what they call solera.

17440. They do that with the brandy also?—I should say so.

17441. In the Bodegas the custom is for Messrs. Domecq and the other houses to buy wine largely from the country round?—They have their own property as well.

17442. But they do not confine themselves to that?—No; very often they buy from the growers. Whether they buy the grapes and press them themselves or whether they buy the must I do not know. Very often they buy a large Bodega of old wine and so on.

17443. Having lived or been a business man in Jerez de la Frontera you must know they have always had stills in their Bodegas for wine spirit?—Yes, for the spirit of wine for fortifying the wine.

17444. Or rather for healing the wine when it gets sick?—Yes, fermentation and so on.

17445. The wine in the Bodegas in Jerez de la Frontera is not kept like it is in France, in vats, but is in open casks?—Yes.

17446. You are tasting it from time to time and if the wines taste a little hard you add so much spirit?—Yes.

17447. And for that purpose a still is always necessary as an adjunct to a Bodega?—Yes.

17448. You will correct me if I am wrong, but that is an old Spanish custom, is it not, of healing the sick wine with alcohol?—Yes.

17449. It is often said in this country it was done to meet the British taste, but I investigated that and I came to the conclusion that the British found the taste there and acquired it, because in order to keep the wine when it goes sick they have to add some alcohol which kills the ferment?—Yes, sometimes some wines go wrong for want of strength.

17450. When I visited Jerez de la Frontera, more than 30 years ago, every one of them had a still for that purpose?—Yes.

17451. Then, as they had plenty of wine they no doubt made spirits of wine as well?—Always.

17452. Spirits of wine are required in Spain like everywhere else?—Yes.

17453. And in Spain there is a great deal of common spirit?—Yes.

17454. Is that wine spirit?—Yes.

17455. Always?—It ought to be.

17456. In Jerez de la Frontera it will be?—Yes.

17457. But as a rule it is common wine spirit?—Yes, only they distil it differently to brandy.

17458. I can remember at the railway station at Jerez de la Frontera they used to sell that and nothing else?—Yes.

17459. What is it made of?—That is a sort of aniseed.

17460. Not a pure grape spirit?—It is made of pure grape spirit but flavoured. They call it by different names according to the flavour.

17461. Do you think any of that is exported?—I think it is very largely.

17462. As a potable spirit?—Not as brandy but by whatever the name is. It comes even to England.

17463. Is it not of a common character and bought by common people?—No, it is very fine indeed, some-

thing like aniseed of brandy. They make very fine spirits. One form of that comes from Malaga and is very wholesome. They are liqueurs.

17464. But I mean aguardiente, what the common people drink in Spain?—That is spirits of wine with a little flavouring of aniseed.

17465. But quite cheap?—Yes, it is very new.

17466. That is not exported, so there is no danger of that coming on the British market as brandy?—No.

17467. You mentioned that there is a special district of La Mancha where the vines are more favourable for making brandy than elsewhere?—In the South of Spain and also in La Mancha on account of the soil and climate. There are other districts where, perhaps, they are not quite so good.

17468. Have you any idea whether the vines in La Mancha district are of the same character as the Cognac vines?—I could not tell you, but I do not suppose so; I do not know.

17469. I suppose they are quite certain to produce a wine of a much better quality of spirit because they would be sweet?—Yes, and because the wines are more generous, too.

17470. And stronger?—Yes.

17471. You do not happen to know the comparison between the amount of brandy got from a hectolitre of the Spanish wine compared with that got from a hectolitre of the Cognac wine?—I think they are on an average equal. It depends very much on the strength of the wine, but I should say about 9 to 1—one bottle of brandy to nine bottles of wine.

17472. (*Chairman.*) As a matter of curiosity, may I ask a question? I have an agreeable recollection of a very well known brand of sherry called Gordon's sherry?—Yes.

17473. Do you know anything about it?—That was my grandfather—John David Gordon—and my cousin was Duff Gordon.

17474. (*Dr. Adeney.*) Perhaps you could explain a classification of brandies which I see here noted in the report of the Select Committee on Brandy from the Cape of Good Hope. They speak of three classes of brandy, two of which we know perfectly well, one of which is from the skins of grapes, which is the marc brandy, and the other is brandy distilled from the distillation of wine, which we also know. But they speak of a brandy obtained from the distillation of the whole grape, known as "grape brandy." Do you know what that means?—I never heard of it.

17475. Then it is possibly a misprint?—It must be a misprint.

17476. Do any of the brandies which come from Spain suffer from what the Cognac people told us of—a flavour called the "terroir" flavour, an earthen flavour?—I have not found that.

(*Chairman.*) The Commission are much obliged to you for the evidence you have given.

The witness withdrew.

Mr. Arthur Southard, called.

17477. (*Chairman.*) What is your business?—I am a wine and spirit broker and expert.

17478. Do you carry on your business in London?—Yes.

17479. What does your trade consist of?—All kinds of liquids—spirits and wines.

17480. We are dealing with spirits to-day. We have heard of some brandies known as Algerian, Egyptian and Armagnac. What do you know of the Egyptian brandies?—I was approached about 20 years ago by the firm of Bolanachi and Fils, of Alexandria, who wanted to open up a trade in this country for this Egyptian brandy. It seemed to me so anomalous that brandy should be offered from Egypt which does not produce vines, that I declined to have anything to do with the brandy unless they could satisfy me that the brandy so offered was the result of the distillation of wine. That they have done, and they have given me the proof that the grapes from which this brandy is made are grown in Roumelia and parts of Greece, Cyprus and Asia Minor. The grapes are brought in fresh from the vines into Alexandria where they are converted into wine the same as in any other country, and from wine they are distilled as brandy.

17481. In Alexandria?—Yes. Messrs. Bolanachi have got the only distillery in Egypt.

17482. Then, of course, the name "Egyptian" comes from the fact of the distillation in Egypt?—That is so, my lord.

17483. As to the imported wines as far as you know, is it genuine wine that is imported?—Perfectly so.

17484. What sort of brandy is produced from these foreign wines?—The brandy is peculiar to itself. It is a very stout, full-bodied brandy which answers exactly for the public-house trade in this country, because it is fat and big, and when a poor man at the counter asks for a glass of brandy and pours some hot water on it he gets something that he tastes.

17485. It is comforting?—Yes. The result is that these brandies, which, of course, were very difficult for us to introduce at first, because it was generally said in the market that no grapes were produced in Egypt, and these brandies must have been distilled from dates—these brandies have gradually overcome all this influence that was against them.

17486. Prejudice?—Yes; and now they are accepted by the very best houses in this country and we have repeat orders.

17487. How do you think they compare in quality with good French brandy? I suppose you would say it is somewhat inferior?—They are totally different. They have not got those beautiful ethers that French brandies have, it is like comparing a cart horse with a race horse.

17488. Supposing the consumer went into a public-house and asked for a glass of brandy and he was given this Egyptian brandy, would it be accepted by the ordinary consumer?—Most distinctly, and not only accepted, but he would like it very much.

17489. For the reasons you have given?—For the reasons I have given. He cannot but like it, because it is so genuine and so pure, and it has the advantage of being very cheap.

17490. How does it compare in price first with a good French brandy and then with a British brandy such as Messrs. Nicholson produce?—It is the cheapest brandy that I know of. Our price in the market varies from 2s. 6d. to 2s. 8d. a gallon in bond, and with the duty added it makes a very cheap brandy.

17491. I do not know whether you would know, but does that benefit of cheapness reach the consumer? Is he charged less than he would be charged by the public-house keeper for British brandy, for instance?—I cannot tell you. I have no experience. I do not reach the retailer, and therefore I do not know what the price is.

17492. Do you know anything as to its qualities from the medical point of view with regard to health?—I cannot tell you that.

17493. Have you heard any complaints?—No.

17494. Is there anything else you can tell us about this Egyptian brandy?—All I can say is that I noticed in the report of yesterday's proceedings that a gentleman stated these brandies had never seen Egypt and that they were shipped from Marseilles. The witness who gave that evidence ought to have known better. It is true that these brandies come from Marseilles but they are distilled in Egypt, and Marseilles is the first port that you can get them to London from, therefore there is some truth in the fact of their coming from Marseilles, but they originate from Egypt and from Greece.

Mr. A. Southard.

24 March 1909.

17495. Of course they come by sea from Alexandria to Marseilles?—Yes, and by steamer from Marseilles to London.

17496. They only touch at Marseilles on account of the line of vessels calling there?—Yes.

17497. In your *précis* you say it is the only real Egyptian brandy. Are there other spurious brandies than Egyptian brandies?—There are brandies that are shipped from some port—which port I do not know—but they touch at Alexandria, and there the bills of lading are changed, and those brandies are called Egyptian brandies, although they have never seen Egypt.

17498. Would they be inferior to the real Egyptian brandy you have been speaking of?—Distinctly inferior. They are not what I should call real brandy, but it strikes me they must be distilled from currants.

17499. And therefore they ought to be cheaper?—They ought to be. I think they must be distilled from currants grown in Greece, and in Greece they call those currants grapes. "La grappe" is the French word, and therefore they bring them over here and say they are distilled from grape wine, but that is not what I call a grape. I call a grape the produce of the vine and not the currant.

17500. At any rate they have very little title to the name Egyptian?—None whatever, except that they touch at Alexandria and change their bills of lading.

17501. Will you tell us something about the Algerian brandies?—The Algerian brandies are grown from the same vine that grows the best French brandy in Cognac, a vine called Folle Blanche, which yields a very large quantity of very delicate and pure brandy, and those brandies in my mind are the nearest approach to anything I have seen to the brandies of Cognac. They are extremely good, very pure, if anything a little too delicate for the public-house trade.

17502. Is there much trade with the Algerian brandies in this country?—Yes, some of our largest houses buy them now and find them extremely useful.

17503. How would they compare in quality with the Cognac brandy?—They compare so well that in one of my recent circulars I had to mention that the quality of the 1908 brandy that had just been made approached very nearly to the very best Cognac that you get from the Charente. They are extremely good.

17504. And as to price?—Half.

17505. Is the trade increasing?—The Algerian colonies produce an enormous quantity of wine. There are some firms in Algeria that produce 40,000 to 50,000 hogsheads in one season. Brandy, if I know anything at all about it, is the result of the overproducing of new wine which had to be burnt down and converted into brandy for the sake of reducing the bulk, and in Algeria at the present moment they have such a quantity of wine, and such beautiful wine too that they are obliged to distil some of the wine so as to accommodate the stock to the storage that they may give to it. They have to make wine to keep as wine. It decomposes and deteriorates with the heat of the summer, and under those circumstances they found that turning it into brandy was the best means of preserving it.

17506. Now as to the third class of brandy, the Armagnac brandy?—The Armagnac brandies are brandies that have been known for centuries. They are grown all in the South of France in the neighbourhood of Béziers. That is the centre of the Armagnac trade, and they have a large output in France, but they do not take in this country. They are rather soft, they have no nerve and no grip, and they are not popular.

17507. Are they cheaper or not?—Oh, no. They rank a little cheaper than the Cognac brandy but not much.

17508. Is there much trade in them?—We cannot make it, we have tried very hard. I have some splendid houses to back us with the stuff, but we cannot get the British merchant to take them up. There is not sufficient difference between their price and the quality to induce the merchant who wants the best to go away from the best.

17509. Excuse me putting a simile to you, but, supposing you were treating this matter as a matter of racehorses, how should you place these three brandies 1st, 2nd and 3rd?— Undoubtedly Algerian first, second Armagnac, and third Egyptian.

17510. And they seem to equalise all round?—Yes.

17511. Speed and stamina?—Yes.

17512. Do you deal with the French brandy?—Very largely.

17513. Do you sell it as Cognac?—There are different qualities of brandy that come from Cognac. There are some cheap brandies and there are some of the best. I maintain that the word "Cognac" should be strictly referred to the produce of the Cognac district pure and simple, and any blend, even if shipped from Cognac, ought not to be called Cognac.

17514. What do you say are the qualities that entitle a product, a liquid, to be called brandy? What is the definition of brandy according to you?—The definition of brandy to my mind is undoubtedly the result of the distillation of wine converted into brandy. I have seen some of the leading brandies which did not have the quantity of ethers that is expected to be appertaining to what is called brandy. Some of the leading shippers have sent us brandy at times which does not come up to those ethers, and yet for all that they are perfectly pure. Therefore I think the chemical part of the description of brandy fails.

17515. Do you allow any mixture of grain spirit with brandy and then call that production brandy?—I should call it brandy, but I would not call it Cognac.

17516. What do you say to British brandy? Ought it to be sold as brandy without the word "British" or with the word "British"?—I think it should be called "British."

17517. I suppose brandy does, taking it generally, convey rather a French origin to the ordinary consumer?—Yes, and yet if I am right in my surmise brandy is the conversion of the two words Brannt Wein, and therefore I think it applies to any spirit approaching brandy.

17518. Which comes from the vine? You trace it back to the produce of the grape according to your own statement?—Yes.

17519. Is there anything you would like to add to what you have said?—I have imported at times some magnificent brandy from California, and there also the vines have been collected from France and transported to California. They have sent us some beautiful produce. So that the world at large seems to produce sufficient wine to supply any quantity of brandy that may be required.

17520. Is there much trade in this Californian brandy?—There has been, but of late the consumption of the wine has been so great in the United States that they have given up to a certain extent distilling their brandy and they do not send it any more to this country. I have not seen any that has come here for some time past.

17521. (*Dr. G. S. Buchanan.*) The Egyptian brandy that you have been telling us about that you are responsible for and deal with you are satisfied is entirely a grape product?—Yes.

17522. You know that from your knowledge of the firm?—I know it from my knowledge of the firm. I know it from the analysis which we received at the time from M. Girard in Paris, the analyst of the Pasteur Institute, and wherever we have been able to get information we have obtained it to satisfy ourselves before I would undertake the sale of it. I have got here the analysis that was sent us at the time.

17523. Do you know if the distillation in Egypt is carried on under Excise supervision?—I cannot tell you. I know that it is distilled from the pot still—not the patent still.

17524. The Algerian brandy is, as I gather from your *précis*, mainly sent to France before it comes here?—Yes.

17525. You get it through France?—No, not Algerian; the Egyptian brandy comes from Marseilles. The Algerian comes direct from Algeria here.

17526. I am not sure if the amount of it imported is large because it must come in the Customs returns under "Other foreign countries"?—It is not distinguished in the Customs report. They call it all brandy, but some of our largest houses buy 200 hogsheads at a time.

17527. But in the returns of the imports of brandy from 1898 to 1907 which were made to this Commission we have the different countries—Germany, the Nether-

lands, Spain, Italy, and so forth—but no mention of Algeria in the "Other foreign countries," and the amount from other foreign countries is very small?—Algeria is a French colony and it may be that it is put under the head of French.

17528. I rather understood from your *précis* that it goes to the Charente and is reshipped from there?—The Algerian brandies are sent to Cognac, where they are stored in separate warehouses, from which they are shipped to England as required.

17529. Then with regard to those brandies that are called Egyptian brandies—brandies that had touched at Alexandria—do they come to this country?—Oh, yes.

17530. And for sale in this country?—Yes.

17531. Do you deal in them?—Oh, yes. We are the agents of Messrs. Bolanachi.

17532. But these brandies that you say are simply called Egyptian brandies because they touch at Alexandria?—No, we do not deal with them.

17533. What advantage is it to call those Egyptian?—We have made a trade for Egyptian brandy and our competitors naturally want to sail under our wind and sell their produce under the name that we have made popular.

17534. You have got down with the genuine Egyptian brandy to 2s. 6d., and they can do something a little cheaper?—1s. 8d. to 1s. 9d. and 1s. 10d., and they do not always sell them at that.

17534*a*. The Armagnac brandy has been made, of course, like the Cognac brandy, under French Excise supervision?—Quite so.

17535. Does the same system of supervision apply in Algeria?—I should think so, but I cannot tell you for certain.

17536. Do you obtain any guarantees in the shape of acquits from your French shippers?—My friends are of the highest respectability and they assure me in every shape and way that the produce they are sending as Algerian is nothing but the distillation of the wine grown in the country and from grapes, and that is sufficient for me.

17536*a*. Do you ask in connection with any of these spirits for the Excise certificate, the acquit?—No.

17537. How do you distinguish brandy which has been mixed in the Cognac with grain spirit—the cheaper brandy?—That is only told through the nose.

17538. Do you issue printed catalogues in your business?—We do. I have got one here.

17539. May I see one? (*Catalogue produced.*)

17540. These are catalogues which go to the whole of the trade?—Yes.

17541. I see you distinguish "Egyptian brandy," "Pale brandy," "Pure grape," and "Brandy" and certain varieties of case brandy?—Yes.

17542. Is that on your knowledge or the statement of the shippers?—It is merely on the statement of the people who sell the brandies to us.

17543. If the public is buying a brandy which is not entirely a grape spirit and contains grain spirit, how do they know it from your catalogue or from your statement?—If we say it is a pure grape spirit we must be satisfied to the best of our ability that it is so. If we do not know, we merely say "brandy."

17544. Do you deal in British brandy also?—Very little. May I call your attention to this that in that very catalogue we made that remark.

17545. That the Egyptian brandy is guaranteed pure grape brandy?—Yes.

17546. You say in the case of Egyptian brandy the grapes are brought fresh?—Yes.

17547. Do you mean the grapes or do you mean the wine?—Actually the grapes.

17548. Not grape juice, even?—No, the green grapes.

17549. Have they not started fermenting in many cases?—Very slightly; not enough to interfere with it.

17550. In your *précis* you say: "There is, in our days, such a craving for cheapness, that orders are frequently given for brandies and other goods at a less price than those offered by the leading firms, whose profits, naturally, are large, but who, on the other hand, give the greatest security for the article shipped." Do you mean by that that the craving for cheapness is the craving of the wine merchants and the grocers and the retailers?—Yes; unfortunately, the competition is such that every day we are asked for something cheaper and cheaper, and I need not say that to produce the article cheaper and cheaper it is necessary to fall back in quality.

17551. As I think you told the chairman, it does not follow that the customer gets the advantage?—No.

17552. (*Dr. Adeney.*) Did I understand you to say that pot stills were used for the distillation in Algeria?—Yes, as well as in Egypt.

17553. Are the pot stills the same simple stills as are used in the Charente?—I have not seen them so far, but I have my friend's assertion that they are the best pot stills that can be used, and they have never used patent stills.

17554. You do not find that the Algerian wine suffers from the taste they refer to in France as the terroir flavour?—No, the terroir comes from the soil. If the soil gives the flavour at all of the terroir, the still cannot take it out or put it in. The terroir is not brought in by the still, but simply by the soil.

17555. We were led to understand that in France sometimes, when the terroir was too pronounced, it was necessary to use a slightly more highly rectifying still?—I do not think you will find the terroir in the best qualities of Cognac from the champagne district.

17556. No, but in the poorer qualities in the other parts of France?—Yes.

17557. Referring to this Egyptian brandy that is not produced from grapes, I have in my hand a diplomatic and consular report, No. 3,785 of the year 1907, and there reference is made to this, and it is stated, "During 1906 a company was formed to produce alcohol from the currants obtained by the Government under the Retention Tax. This spirit has proved of great use as an illuminant for heating and for driving small engines." So that clearly that is a neutral spirit. I take it this Egyptian brandy, which you say comes into this country and is not derived from wine, must be this currant spirit artificially flavoured?—I expect so.

17558. (*Chairman.*) That is what touches Alexandria?—Yes.

17559. But the good Egyptian comes from the grape?—Yes.

17560. (*Dr. Adeney.*) Have you any knowledge of the brandies that come from South Africa?—I have seen very little of them. In the sixties, before the Commercial Treaty was passed, we used to deal very largely in South African wine, but when the duty was levied and the alcoholic test was brought in, the sale of cheap wine gradually fell off, and only lately I was asked by one of the Commissioners of the Colony to report on a sample of the wine they are producing now. It is too horrible for words. It has gone away quite from what they used to sell formerly.

17561. (*Chairman.*) Do you think they will be pleased with your evidence in South Africa?—I do not know. They must alter their system of making their wine. They have fallen away, and I know at the present moment that Lord Blyth is on his way out there to help the Government to extricate themselves and produce a better article.

17562. (*Dr. Adeney.*) As we are on the subject of brandy, you do not require a nice tasting wine to produce a good brandy—so we were informed in the Cognac district?—I am told the thinner the wine the better the brandy. A very coarse wine does not make the best brandy. It must be very delicate and absorbing, because it has less of the others in it than a very stout full-bodied wine.

17563. Although this South African wine you speak of is unpleasant in flavour it might produce a good brandy?—It might, but I have not seen the result.

17564. (*Mr. J. Y. Buchanan.*) You mentioned the fact that much brandy was imported from California?—At one time, but not now.

17565. Have you ever had any experience of brandy imported from South America, Chili, or the Argentine?—I have not seen brandy imported from there. I have seen wine, and very good wine, too.

17566. But not brandy?—No.

17567. It has not gone that length yet?—No.

(*Chairman.*) The Commission are very much obliged to you for your evidence.

The witness withdrew.

Mr. S. A Vasey.

24 March 1909.

Mr. S. A. Vasey, F.I.C., called.

17568. (*Dr. Adeney.*) I believe you are consulting chemist to the "Lancet"?—Yes.

17569. Are you a Fellow of the Institute of Chemistry?—Yes.

17570. And are you a member of the Society of Public Analysts?—Yes.

17571. You have had considerable experience, have you not, in the analysis of Cognac brandies?—Yes, I have.

17572. You are author of a report which was published in the "Lancet" some years ago, and which attracted a good deal of attention?—Yes.

17573–4. Would you give us the reference to that?—The report was published in the "Lancet" of November 29th, 1902.

17575. What is your definition of "brandy"?—My definition of "brandy" is that it should be a matured pot still spirit obtained from the distillation of wine.

17576. Take the first word of your definition, "matured." Do you think that is necessary? Do you regard new brandy as in any way unwholesome?—Yes, I do. I think it is necessary that it should be matured. In using the word "matured," I would not say over a large number of years, but some years, at any rate.

17577. Would you give a minimum limit?—Four or five years.

17578. What do you think occurs in maturation? Is it more than a mellowing of flavour?—That is a complex question. I think that it is probably the oxidation of some of the secondary products of distillation.

17579. Does that affect the spirit beyond giving it a more mellow flavour? Does it make it more wholesome to the consumer?—I should say it does.

17580. Have you any evidence of that?—No, I am not a medical man, and it is perhaps hearsay. I have no evidence on that point really. It is perhaps a matter of palate.

17581. I see that you by inference put out the patent still?—Yes.

17582. You would not accept a wine spirit produced by the patent still as brandy?—No. I think the use of the pot still implies the use of a wine of good quality.

17583. Is it impossible to get a brandy of good quality from the use of the patent still?—I should not like to say that. What do you mean by quality exactly? Do you mean flavour?

17584. Good flavour?—I should say impossible.

17585. I do not say it is done, but you say you think it would be a practical impossibility to do it?—I think it would be impossible to produce a palatable and satisfactorily flavoured brandy from the patent still.

17586. What have you in your mind when you speak of the patent still?—A still that has a very powerful rectifier.

17587. Do you know any of the stills used in the Midi in France?—No, I have not seen them.

17588. You know they are very much more highly rectifying than the ordinary pot stills?—I understand so.

17589. Would you accept them in the class of pot stills or patent stills?—If they were powerful rectifiers I should accept them as patent stills producing a more or less pure—that is featureless—spirit.

17590. Do you know anything of the brandies produced in the Midi district?—I have not examined them analytically.

17591. So you could not give us any definite answer as to how you would classify them?—No.

17592. You regard it as an advantage in your definition of limiting a wine spirit to the product of the pot still, and that that would help us so far as chemical analysis is concerned?—I believe so.

17593. Can you give us the evidence on which your belief is founded?—I think it is generally admitted that chemical analysis differentiates between the pot still and the patent still, and, therefore, if the definition for brandy was a pot still spirit, analysis would be useful in differentiating brandy from highly rectified spirits like grain spirit, potato spirit, and so forth.

17594. There may be in the market brandies produced by highly rectifying stills, the composition of which would overlap with some of the less highly flavoured pot stills?—You mean a patent still brandy?

17595. Yes. We had it in evidence which was given on the subject of whiskey. There it was shown us by analysis that there were some patent still whiskies?—Have you the analyses?

17596. They are published in the minutes of evidence on whiskey. They distinctly overlap?—In regard to all the secondary constituents, that is to say, the ethers alone, or the furfurals alone, or the sum of the constituents?

17597. Certainly, with regard to the total, but I have not it sufficiently in my mind to say it was in each individual constituent, but certainly with regard to the total co-efficients. If such an overlapping occurs in different kinds of brandies, would you think it would be safe to exclude them?—That is the first time I have heard of that case. I should not have expected to have found any appreciable quantity of secondary products in the spirit obtained through the patent still.

17598. We have had evidence?—Of course, I accept your statement with regard to that.

17599. If that be the case, it would rather weaken your statement?—It would, certainly.

17600. Do you happen to know the report that was issued by the French Technical Committee of Œnology of 1904?—I do not know it; I have heard it referred to, but I have not seen the report.

17601. They refer to a very wide variation in the composition of co-efficients?—Yes, I believe they do. That is my recollection of the trend of the report.

17602. And the minimum and maximum was so wide that they refused to recommend either a minimum or a maximum?—I believe that is so.

17603. So that would go towards further weakening your definition?—It would if the rest of the analysis was correct.

17604. You would not suggest that M. Rocques, who drew up the report, is not an authority?—Oh, no, I should not.

17605. He is an authority that all chemists would accept?—Yes.

17606. I see in your *précis* that the criterion of ethers was upset by the publication of the analytical facts in the North London case?—Yes.

17607. Could you briefly give us those facts?—I refer there to the increasing difficulty of analysis which we must admit. Analysts are often guided, as most of the Commission I am sure know, by certain constituents of things. For instance, in butter they are guided by the amount of volatile acid. As soon as that was accepted as a criterion, and it was accepted as a criterion, and I believe to some extent is still, there were scientific adulterators who supplied any deficiency that might exist in the butter by adding artificial butyric acid to it, and there is no doubt that sort of thing happened in the case of brandy, as soon as it transpired in the North London case that the criterion was practically ethers.

17608. It was not an advantage to adopt it?—No. Up to that point the ether was a very fair criterion of a pot still brandy.

17609. Provided it was considered in combination with other constituents?—Yes.

17610. I gather from your *précis* that you have analysed a large number of Cognac brandies?—Yes, privately and for the "Lancet."

17611. I think it would assist the Commission if you could give us the more important ones in a tabulated form?—I have not that prepared now, but I should be very pleased to prepare recent "Lancet" reports for the Commission.

17612. We should be much obliged if you would

supply us with such a table?—I will get it prepared for the Commission. You mean in addition to the analyses of samples published in my report in the "Lancet"?

17613. Yes. Perhaps you could give us, as far as possible, positive information as regards the origin of the samples too?—Yes, as far as I can I will.

17614. And the methods especially, especially those employed for the determination of the higher alcohols?—Yes. With regard to that point I should like to point out to you that analysis has advanced in that matter since this question came before the public. I am, in fact, now engaged on an inquiry, but I cannot very well discuss its results as it is an investigation I wish to publish later on, and which is not yet finished. I must exclude that method.

17615. I simply ask for the information for use when comparing with other analyses?—Yes.

17616. As to the composition of these Cognac brandies have you discovered any uniformity in composition?—A very remarkable uniformity.

17617. What brandies do you refer to? Are those the bottled brandies that we get in this country?—The bottle brandies of Martell, Hennessy, Otard, and so on. There is a remarkable uniformity of composition which seems to me to be on all fours with the judgment of the palate of the blender or taster at these various depôts in France.

17618. We have had evidence that the French produce or blend is judged entirely by taste?—Absolutely, I believe.

17619. I quite agree with you from my own experience, because I have found that that uniformity of taste is accompanied by uniformity of composition?—Yes, it is very remarkable. I have found one instance where chemists were consulted—in fact they were at the distillery, so that I would not like to say that absolutely they trusted to taste, because I think there is a certain amount of control in certain places by chemical analysis.

17620. Then as to produce from different districts, do you think chemical analysis can help us very far in tracing their origin?—I think chemical analysis would help us very much if the distillers would adopt analysis themselves, and would keep some record of the batches of brandy they send out, marking the bottle or the label by a number or mark which distinguishes wines of a certain batch, and that batch could be analysed, so that we would know exactly its composition. It would give us a good deal of help in this country in the control of brandies being sold here. For instance, supposing Hennessy is getting ready for bottling two vats of brandy. It would be quite simple for Hennessy to make an analysis of that brandy, and it would be quite simple for Hennessy to put on the bottle in the case of that brandy some mark corresponding with the analysis that was made, and then they could keep that analysis in their archives somewhere for reference in case a dispute turned up as to a brandy being sold in the market. I think analysis would help us very much in that direction.

17621. Do you think chemists are sufficiently agreed among themselves as to methods and details of those methods to assist?—I should not like to say they are.

17621*a*. Dr. Fernbach gave a very decided expression of opinion here a few weeks ago on that subject, and he gave us to understand that he thought it would be hopeless to expect uniform results from the same spirits, except in the hands of the same chemists?—I do not see why. If it is shown that standard brandies like Martell's and Hennessey's give absolute uniform results on chemical analysis I cannot quite follow that.

17622. I am afraid I did not make myself quite clear. What I mean to say is this, that before we can expect producers and blenders to rely on chemical analysis we must show that the methods employed by different chemists are capable of yielding uniform results?—Yes, certainly.

17623. Has that been done up to the present time?—No.

17624. You think it is most desirable it should be done?—I think it is most desirable it should be done.

17625. Have you any suggestion as to how that could be done practically?—No, I am afraid not. I have not looked into any question of administrative machinery in the matter.

17626. You have not considered the question of the formation of an authoritative board?—Oh yes, I have. You mean in the shape of a tribunal, a court of reference?

17627. Yes?—I certainly think in this country we want some court of reference of that kind.

17628. You think it would assist us materially?—It is quite obvious our magistrates are not equal to dealing with technical subjects of this character.

17629. Would it be possible to assist by means of an expert assessor?

(*Chairman.*) Would you explain where you would bring in this assistance? Under what circumstances is this body to act?—It is a little hard for me to suggest that, but I only suggest at any rate that we might have a scientific officer acting in conjunction with the Local Government Board or one of the Government departments.

17630. What duties would you impose on them?—The duty of referees, much in the same way as the chemists at the Clifford Inn Laboratories are referees under the Food and Drugs Act now.

17631. Would you employ them as a general body to create definitions, or would you employ them as cases arise before magistrates to assist them?—Both, my lord, I think.

17632. (*Dr. Adeney.*) As to the effects upon the consumer of brandies, you express some opinions in your *précis*?—As I said just now, I am not a medical man, but I speak from practical observation. You are referring to the question of drinking brandy and soda after a service of wine at a dinner, are you not?

17633. Yes?—As I state in my *précis* it is a fairly common experience that men when they drink wine, a service of wine in particular with their dinner—say, they start with sherry and then go on with hock, claret, champagne, port and so on—a full service of wine—that by-and-bye they get commonly very thirsty, for a reason well known to medical men. They will never follow that service of wine if they can help it with whiskey and soda; it is nearly always brandy and soda. They say, "Let us keep to wine and there is no headache in the morning." I brought that before the notice of the Commission because it is perhaps an interesting physiological point which is worth attention.

17634. (*Chairman.*) Do you mean that is what you think is the practice of persons from their knowledge that brandy comes from wine, or is it that you think medically it ought to be so?—No, I think it is because people understand, or they think that brandy is a wine product and is made from wine.

17635. Do you think the young gentleman or the old gentleman, as the case may be, says "Give me brandy and soda" for that reason instead of whiskey and soda?—Yes, my lord. They say, "Let us stick to wine, grape upon grape," and they drink brandy and not whiskey.

17636. For the reason you give?—Yes, because they believe that brandy is distilled from wine or is made from wine.

17637. At what period do they ask for brandy and soda?—That varies, my lord.

17638. You mean in the evening?—Yes, my lord, two or three hours after dinner.

17639. Not at the dinner table but afterwards?—Yes; playing billiards or something of that sort.

(Adjourned for a short time).

17640. (*Dr. Adeney.*) There is one question more I should like to ask you. I see you refer in your *précis* to rather an interesting observation on the difference of behaviour of mixtures of whiskey and soda and brandy and soda?—Yes.

17641. The frothing is different?—Yes.

27642. Of course, there is a physical explanation of that?—I have no explanation to offer. I do not know what the explanation is, but I can suggest that perhaps it is oils or something present. I do not know whether you have a better explanation; if so, I should like to hear it.

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17643. I have some idea in my own mind?—I only mention that because it seems to be an interesting differentiation point, that is all.

17644. It is an interesting observation, and I wish we had an explanation of it?—Yes, but I cannot give one.

17645. (*Dr. Cushny.*) With regard to this physiological experiment of brandy and soda after a service of wines, is that a general experience, do you think?—Yes, I think so. I think you find it is quite popular.

17646. Of course, it is a popular idea?—Yes, rightly or wrongly.

17647. It is merely an idea? You do not suppose there is any real ground for it?—I think there must be some experience about it, otherwise I cannot account for the practice being fairly prevalent. There must have been some experience when whiskey and soda was drunk after a course of wines that it invariably was followed by headache, but when soda and brandy —assuming it was genuine brandy—was used, the headache did not appear.

17648. There is no actual instance you can give? There is no evidence you can produce?—I am afraid not. I did not put that in at all as a scientific observation, but only as a pratical one. That is all.

17649. (*Dr. Bradford.*) As I understood one of your answers to Dr. Adeney as to the definition of brandy, you think that the pot still should be used because, as I think you said, that implied the use of the good wine?—Yes, I did say so.

17650. Do you mean that if an indifferent wine is used in a pot still that that imparts an unpleasant flavour to the product?—Yes, the pot still would not rectify out the unpleasant odours, or things which give rise to unpleasant odours, in the wine.

17651. One of your objections to the patent still being used in the distillation of brandy lies in the fact that an indifferent wine might be used in a patent still?—That is so.

17652. But as a matter of fact quite good wines are used in patent stills in the distillation of brandy at the present time, are they not?—I am not aware of that.

17653. Do you mean you think all the wines used in the patent still are indifferent?—No, I would not like to say that, but where a wine is of good quality it is obvious that you do not want a powerful rectifier.

17654. (*Dr. G. S. Buchanan.*) Have you any knowledge of the use of patent stills for the distillation of brandy or grape wine?—No.

17655. There are, of course, a great variety of stills used in France, some rectifying more and some less?—Yes, that is so.

17656. When you speak of pot still, I take it you are not referring solely to the most primitive and least rectified pot still?—No; my impression of a pot still is the pot still I saw at work at Cognac.

17657. Your inquiry there was in 1901, was it not?—The actual inquiry on the spot was. The report appeared a year afterwards.

17658. The recovery of the vines from the phylloxera had then set in?—Yes.

17659. I think you reported that in this article, and I think you would say that as a matter of general knowledge it has been since maintained?—Yes.

17660. And there has been a considerable increase of stocks of genuine brandy since your report?—Certainly, that is so.

17661. In that report, after giving a number of analyses of typical brandies, grape brandies and brandies at different stages of distillation, and so forth, you gave the analysis of some brandies that had been purchased in restaurants and public-houses?—Yes, I did.

17662. For instance, I see there was one sample bottle of brandy purchased at a public-house which bore on the label the name of a highly-esteemed house in Cognac; there was no label on the shoulder; the cork was branded with the word "Bass's," and the green metal capsule showed a bunch of grapes in relief. The sample proved to be a specimen of flavoured grain spirit. Sample 2 was purchased at a public-house, 4½ fluid ounces being supplied for 1s. It proved to be a mixture of rum and spirit. Sample 3, purchased at a railway restaurant in London, amounted to 4 fluid ounces, for which as much as 2s. 2d. was charged. This proved to be a genuine brandy of the star type, but the price charged for it was exorbitant. Sample 4 was also obtained at a railway restaurant in London, 1s. 5d. being charged for 4½ fluid ounces. It contained some genuine brandy blended for the most part with characterless spirit. Have you since that date examined any other public-house samples?—No.

17663. There are 20 ounces to the pint, are there not?—Yes; 4 fluid ounces would be about half a tumblerful. It was 1s. 5d. for 4 fluid ounces in one case, and in another case it was 2s. 2d. for 4 fluid ounces.

17664. That is at the rate of over 10s. a pint?—Yes.

17665. Those are retail prices?—Yes, over the bar.

17666. I suppose when spirits are sold at such a rate as that retail, one must assume that a very large profit was made?—Yes, that is so.

17667. And if there is such a very large profit, I suppose there is something to be said for it being reasonable that a genuine article should be supplied seeing that the difference in price between a genuine and an inferior article must be almost insignificant compared with the profit made?—Yes, quite.

17668. Since this inquiry that you have been speaking of, I take it you have had further experience of brandies in the "Lancet" laboratory, brandies have been sent to you for analysis?—Yes, I have examined a great number since this report was published; in fact, when this report was published it led to a lot of samples being sent to the "Lancet" offices for analysis and opinion.

17669. I suppose the series of samples that you obtained in the course of your inquiry have been useful for comparison?—Yes, they have.

17670. When you have samples sent you, I suppose they are generally samples of proprietary articles, articles sold under brands with well-known names?—Yes.

17671. Do you, in addition to the samples actually sent you to the "Lancet," ever yourself get samples taken on the market to compare with them?—Very often, but it is not invariably our practice.

17672. But it is as a fact often done?—Yes, it is often done as a check. I do not remember any exception in the case of brandy, it has always been the same product, chemically speaking.

17673. When you are making reports that one sees from time to time in the "Lancet" on spirit, I take it you are not under any difficulty as regards the quantity of spirit that you have got? You can have as much as you like?—Certainly.

17674. You are not tied like the unfortunate public analyst who has to be content with one-third of a sample?—No, we have as much as we like. I quite appreciate your point.

17675. And, again, you have this advantage that as you have done a large amount of special work on the subject you have available a number of comparative analyses got by the same methods?—Yes, that is so.

17676. And, also, you can have the statement of the merchant, for what it is worth, for comparison?—Yes, he generally sends in a statement of claims about it.

17677. You regard that as important?—Yes.

17678. And then, in some cases, I suppose you can avail yourself of the assistance of the taster?—Yes.

17679. You have all those things in front of you?—Yes. I have facilities for doing this kind of work.

17680-1. Do I understand that you contend, as I think the "Lancet" has contended on many occasions, that it is in the public interest that a distinction should be made between different well-marked classes of spirits such as, we will say, brandy and British brandy?—Yes.

The witness withdrew.

Mr. ALFRED GILBEY, recalled.

17682. (*Dr. Bradford.*) You are a director of Messrs. W. and A. Gilbey?—Yes.

17683. You have given evidence before us previously, I think?—Yes, on two occasions, with regard to whiskey and with regard to rum.

17684. You have come here to-day to give evidence with regard to brandy, have you not?—Yes.

17685. Will you state what, in your opinion, is a suitable definition of brandy?—Brandy in our opinion is a spirit distilled from wine in a pot still. You will notice in our list, which perhaps some of the Commissioners would like to see, we set out the different kinds of brandies on pages 22 and 23. (*Same handed to the Commission.*)

17686. Will you first of all tell us what is the practice of your firm in selling different kinds of brandy?—In brandy, as in all other descriptions of wines and spirits, we have always acted on the principle that the contents of the bottles should be properly and correctly described. You will see on pages 22 and 23 of our price list that we have three types of brandy other than those from Spain and Australia.

17687. Will you kindly enumerate the three types so as to get it on the minutes of evidence?—The cheap varieties are described by us as "compounded of foreign pure grape brandy and highly rectified British spirit." That is the second lot of brandies set out on page 22 of our list as "brandies for domestic purposes." To my knowledge this brandy has been sold with this label and description certainly for 30 years.

17688. You mean by your firm?—Yes. Some people think we have handicapped ourselves to a certain extent by describing it like this, but it has been our practice in our business always to correctly describe all spirits.

17689. I notice as regards these brandies which are defined as "compounded of foreign pure grape brandy and highly rectified British spirit," that there is a considerable difference of price, varying from 24s. to 45s.?—Yes. All those are of the same quality, but you will notice that they vary in strength.

17690. Upon what does the difference in price depend?—The difference in strength.

17691. And not on anything else?—No.

17692. It does not depend upon a different proportion of grape brandy and rectified spirit?—No, not at all; they are all the same.

17693. What are the other descriptions?—In our list you will see "brandies of fine quality." These brandies are distilled by the farmers, collected for us and stored in our establishment in Cognac. They are all pure grape. At one time when the vineyards in Cognac were devastated by phylloxera we had to get these particular brandies from other parts of France, but since the vines have been replanted all the four brandies under this heading are the produce of the Charente.

17694. How are these described? Are they called "brandy" or "Cognac brandy"?—You will see on the label that we call them brandy. "Castle F. brandy. Quality: Pure foreign pale brandy. Strength 18 under proof by distillation when bottled. Spirits are liable to lose strength by evaporation and age. Measure: Six bottles contain approximately one gallon. Bottled and guaranteed by W. and A. Gilbey."

17695. Will you also give us, in order that we may get it on the notes, a description of the other labels?—Yes. The next is "Castle U.V. brandy. Quality: This pale brandy is compounded of pure foreign grape brandy and highly rectified British spirit. Strength: 25 under proof by distillation when bottled. Spirits are liable to lose strength by evaporation and age. Reduced by addition of distilled water. Measure: Six bottles contain approximately one gallon. Bottled and guaranteed by W. and A. Gilbey." The next is "Fine Champagne Cognac. Extremely old. W. and A. Gilbey, wine merchants and distillers, London and Cognac." The next is "Champagne Cognac. 'L'or extrait du vin.' Qualité extra. Strength 18 under proof by distillation when tested by Sykes's hydrometer for bottling. Distilled from the juice of the grape with all the vinous qualities retained," and then there are five stars. The next is "Castle F.O. brandy. Quality: Choice old Cognac brandy. Strength 25 under proof by distillation when tested by Sykes hydrometer for bottling. Reduced by addition of distilled water. Measure: Six bottles contain approximately one gallon. Bottled and guaranteed by W. and A. Gilbey." All those set out on page 23, namely, the "Cognac Royal," the "Castle F.O.," "L'or Extrait du Vin," and "Champagne brandy," are Cognac brandy of the best description, and have come from the very best districts of Cognac.

17696. What do you understand by a Cognac brandy?—A brandy distilled in the two districts of the Charente and Charente Inférieure.

17697. Is there any other qualification? Do you attach any importance to where the vines are grown?—We only buy from the best districts. We employ a representative out there who collects at the same time as he is collecting for himself—a gentleman who has given evidence here—and we only buy from the best districts.

17698. To your mind, is a Cognac brandy a brandy that is distilled in the Cognac district?—Yes.

17699. Or is it a brandy the wine of which has been produced in the Cognac district as well as being distilled in the Cognac district?—Yes. The wine must be produced in the Cognac district, of course.

17700. Are there any other varieties of brandy that your firm deals in?—We sell Australian brandy and Spanish brandy, which is made in the same way as it is made in Cognac, only there is no doubt that there is no district which gives such a fine flavour as Cognac. Although other countries have tried to make brandy they have never made it as good as Cognac, and though I consider the quality that you get from Australia is very good it is not of the same fine quality as Cognac.

17701. We have had some evidence to suggest that some of the varieties of Spanish brandy may be indistinguishable from Cognac brandy?—I have never seen any that I could not tell.

17702. I notice that the price of the Australian and Spanish brandies are rather high as compared with the others?—They are not quite so high as Cognac, but they are higher, of course, than the cheap brandies which we describe, for instance, as "Brandies for domestic purposes," which we admit have grain spirit in them.

17703. But the Australian brandy compares in price with the brandies of fine quality for example?—But you will see that the strength is different. We sell some very low strength brandy, but if you compare it strength for strength you will find that the Spanish brandy is a little more expensive.

17704. I was comparing the Australian, where the strength is not given?—We have not mentioned the strength of the Australian brandy.

17705. Have you any knowledge of Egyptian brandy?—No. I have seen samples.

17706. But you do not deal in it?—No.

17707. Is there anything else you wish to bring before the Commission?—I should be very glad to answer any questions that you put to me if you desire any information.

17708. (*Dr. Adeney.*) Do you know anything of the production of wine spirit in France?—No, I could not give the figures.

17709. Do you know the total production?—I cannot give it. I believe it is some 65 million gallons in Cognac. I am not sure about the rest of France, but it is a large quantity, especially in the Midi.

17710. I have a table here which appears to show that the production is very much less than that?—With regard to Cognac?

17711. It is stated in this table that in the year 1900 the total production of the spirit distilled from wine was 5,652,000 gallons?—Altogether in France?

17712. Yes. Do you think that could be correct for the whole production of France, not only from the

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Cognac district but other districts?—I know that we had to pay a very high price in 1900 for Cognac; it cost us a great deal of money to make, much more than it has cost in the last few years, because there has been such a large production of wine in Cognac that we have been able to make brandy much cheaper than we could six or seven years ago.

17712*a*. Do you know the South African brandies?—No, but of course there is a very small production of wine at present in South Africa. I should think it is very small.

17713. In a report that I have already referred to to-day—the report of the Select Committee on Brandy Advances in the Cape of Good Hope, they give three classes of brandy—one from the Marc, one from the distillation of the wine, and then they speak of grape brandy by the distillation of the whole grape, do you know this grape brandy?—No, I cannot tell you that.

17714. I presume it is the brandy, not the juice of the grape?—You mean the skins and the juice of the grape fermented together?

17715. Yes?—It might have been, but we have no experience of that.

17716. You do not know of that?—No, not in the trade. What we should like would be that everybody should have to describe their brandies as we do in our price lists and on our bottles. We do not think there would be any injury to the trade and it would be a protection to the public.

17717. (*Mr. Guillemard.*) That you mean with regard to all spirits?—Yes.

17718. And wine generally?—Yes.

17719. You are dealing with spirits particularly?—Yes, and we would apply it to wines as well as spirits.

17720. (*Dr. G. S. Buchanan.*) Is the brandy that you sell as "French" pure grape brandy? They are not necessarily all Cognac and they are not sold as Cognac?—We do not sell them as Cognac, but as it happens they are all Cognac owing to the largely increased production of Cognac brandy.

17721. But it would be open to you under that title and under that label to include any other grape brandies that are obtained from France?—We could, certainly.

17722. That is to say you could have a mixture, such as we saw in Cognac, of Cognac with grape spirit obtained from the Midi and the other districts?—Yes, certainly.

17723. Then, with regard to the "brandies for domestic purposes" which are declared as "brandies compounded of foreign pure grape brandy and highly-rectified British spirit," is that highly-rectified British spirit British brandy?—No, it is British plain spirit.

17724. I ask you that because we had it given in evidence this morning by some compounders that they sometimes mixed their British brandy, for their better qualities, with Cognac?—Yes.

17725. But that is not so in your case?—We have Cognac in that to give it the flavour.

17726. True, but it is not a flavoured compound to begin with—it is not a compounded article?—No, we never use any flavours of any sort.

17727. Have you experience of Egyptian brandy?—No. I have seen samples of it. I believe at one time we bought a small portion, but we do not deal in it. I do not know anything about it.

17728. (*Dr. Adeney.*) We have had it in evidence that the Algerian brandy is imported into France and stored in warehouses in the Charente. Are you aware of that?—No, I do not know from our own experience, but that might be so.

17729. You could not give us any information from your own knowledge, or experience of the possibility of that Algerian wine being sold in this country as Cognac?—I believe they have some regulation in France now which would prevent that.

17730. That regulation is only a few weeks old?—Yes.

17731. They may not do that in future?—I do not say that that may not have happened. We know that the production of wine in Algeria is something enormous.

17732. We have heard that, and that it is a good brandy that is produced?—I should think so, because the wine is a quite good, palatable wine.

17733. (*Mr. Guillemard.*) Have you got a branch of your house in the Charente or have you only a representative there?—We have a representative and a store there.

17734. Are you sufficiently connected with the Charente to know the working of the French regulations?—No.

17735. I thought you might be able to help us on the working of the acquit system, but I suppose you would not care to speak to that?—Do you mean the system that has just been put into force?

17736. The working of the red and white acquits?—No, that does not concern us.

17737. You have no special knowledge of it?—No.

17738. You have no special knowledge, for instance, as to the amount of supervision there is by the Excise?—No, I should think you would get that from the Cognac shippers.

17739. We have had a certain amount of evidence, but you being an Englishman, and looking at it with other eyes, I thought you might have views. You have not studied it?—It would not be likely to trouble us, because we only deal in one class of Cognac.

17740. You have no special knowledge of that?—No.

17741. (*Dr. Adeney.*) As I understand you, you do not yourself deal in Algerian brandies?—No, we have not bought any.

The witness withdrew.

Adjourned to Monday, 5th April, at 12 o'clock.

THIRTY-FIFTH DAY,

Monday, 5th April, 1909,

At the Westminster Palace Hotel.

PRESENT:

MR. GUILLEMARD took the Chair.

W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., Sc., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

Dr. T. E. THORPE, C.B., F.R.S., called.

Dr. T. E. Thorpe.

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17742. (*Dr. G. S. Buchanan.*) You are the Principal of the Government Laboratory, and you have kindly forwarded a memorandum of matters on which you are prepared to speak and to assist the Commission?—That is so.

17743. Perhaps we may briefly go through your *précis?* So far as the Revenue is concerned you have not in the Government Laboratory any official definitions of the various spirits distilled in this country, have you?—All the spirits distilled in this country are legally and officially known as "Plain British Spirits."

17744. Patent still and pot still spirits are subject to the same regulations in regard to manufacture, warehouse storage, distribution and sale?—That is so.

17745. British and foreign spirits are not allowed to be mixed in bonded warehouses when intended for home consumption, but there is no legal or official objection to the mixing or blending of pot and patent still spirits?—That is so.

17746. In fact the laws and regulations provide for operations of that kind, do they not?—That is to say, the operations of mixing or blending?

17747. Yes?—They do.

17748. With regard to "Plain British Spirits," we had some evidence the other day about British brandy. Would that be included under the term "Plain British Spirits"?—British brandy, of course, is a compounded spirit.

17749. (*Dr. Adeney.*) And would be separately classified?—And would be separately classified.

17750. (*Dr. G. S. Buchanan.*) Would it come within your province to determine whether a given spirit was British brandy for the purpose of the Excise?—It might.

17751-2. A very large number—thousands of samples I think—of spirits and spirituous mixtures are annually analysed in the Government Laboratory, but the question for which they are analysed is not frequently whether they are the product of patent still or pot still distillation?—Very seldom, and then only, as a rule, for purely Revenue purposes.

17753. With the object, for example, of ascertaining from what distillery a particular spirit has come, or something of that kind?—Mainly for tracking or identifying a spirit.

17754. At the Government Laboratory you also receive reference samples which are sent under the Food and Drugs Acts by magistrates, which are referred to the Laboratory for opinion in disputed cases?—We do. We are in the habit—not very frequently but from time to time—of receiving samples of spirits sent by magistrates under the provisions of the Food and Drugs Acts.

17755. What has been the alleged adulteration in those cases?—It depends on the particular spirits. Perhaps it may be convenient to the Commission if we separated them under the main heads. Taking whiskies, for example, I have had taken out from the records of the Laboratory for the last 20 years all cases under the Food and Drugs Acts which we have received. In that period there were 49 such cases. Of these, 42 cases were simply to test the allegation as to whether the samples were or were not of the legal strength. In the other cases, there was some doubt raised as to the genuineness or authenticity, and in one case whether the spirit was whiskey or not. I may say that these cases have come from all parts of the United Kingdom, but the questions as to genuineness have all come from Ireland, and four of them came from one place—Granard in County Longford. In 1893 a charge was made at Granard that the whiskey contained green copperas to the extent of 1·1 grain per gallon. We were unable to find the slightest evidence of the presence of that salt. In the same year two samples of whiskey were received from Granard, and two also from Longford, with some aspersions as to whether they were or were not genuine. The only thing that we were able to find out about these whiskies was that they were in excess of the legal strength, that they were stronger than there was any obligation on the part of publicans to sell, and I suppose it was this unusual circumstance which gave rise to the suspicion that the spirit could not be genuine whiskey.

17756. Are those samples that are marked 15·3 and 16·2 under proof in your Table I. the samples you refer to?—They are. (*See Appendix* Q, I.)

17757. Are those very unusually strong?—It is not often you get them so strong as that in common whiskies.

17758. You do not mean such as are sold in the Army and Navy or Civil Service Stores, because in places like that they are frequently sold about that strength, are they not?—Those are bottled whiskies, but these would probably be ordinary public-house whiskies sold over the counter. The report in 1893 as to the strength seemed reassuring to Granard, and no more were forwarded for about nine years, and then in 1902 another question was raised to the effect that the whiskey sold in Granard, or some of it, contained what was thought an excessive quantity of extractive matter—about eight-tenths of a per cent. There was that amount of extractive matter which we found to be mainly sugar. Of course, as the Commission is aware, it is not infrequent that samples of whiskey do contain caramel and saccharine liquids. In our opinion this amount of extractive matter did not materially affect the commercial character of the product. However, in 1905, a similar charge was raised at Granard as to excessive quantity of sugar. We found in that case the amount of sugar was about half per cent., and we said that it was more than is found in a whiskey which has not been treated with caramel. Those practically are all the cases, other than the cases for dilution below the legal limit, which in 99 cases out of 100 is the point at issue.

17759. (*Dr. Adeney.*) Have you ever been asked to specially test for vitriol in whiskey coming from Ireland?—Yes, we have. I was coming to that matter in a few minutes. Is there any other question regarding whiskey in this paper that you would like me to say anything about?

17760. (*Dr. G. S. Buchanan.*) In Appendix I.?—Yes.

17761. The point as to whether the whiskey has been properly described, say, as "whiskey," or "Scotch whiskey," or "Irish whiskey," or whether it has contained patent still spirit or silent spirit has not been referred to you under the Food and Drugs Acts in the case of reference samples?—No, we have had no single instance where a question of that kind has been raised.

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17762. Could you tell us now your experience with reference samples in regard to brandies?—With regard to brandy the questions usually put to us are whether the brandy is British brandy or foreign brandy. Here, again, I have taken out the instances which have been referred to us for the past twenty years, but it appears that prior to 1893 no case of the kind was ever sent to the Laboratory. From that time onwards, cases have been comparatively frequent, especially during the later years. From 1893 to the present we had had 26 samples of brandy referred to us. Eight of these were simply to know whether they were of the legal strength, and with regard to 18 of them the question raised was whether the spirit was or was not genuine brandy.

17763. That no doubt resulted from the fact that after 1902 several local authorities in Scotland and afterwards in England, took action under the Food and Drugs Acts on the assumption that the genuine brandy should be entirely derived from the distillation of wine?—That was so. The local authorities, we understand, were moved to take action by representatives of the trade.

17764. Could you tell us what the result of your examination has been of these spirits, and the opinion you arrived at on those allegations?—On the whole, in the cases that were brought to the knowledge of the magistrates the charge, namely, that the brandy was not wholly unmixed spirit, was sustained. In some cases the brandy was definitely and distinctly British brandy. In other cases it was brandy which was probably not wholly derived from the juice of the grape, but certainly was mixed with foreign spirit, but we were not able to, and we have never professed to be able to, identify the origin of that foreign spirit.

17765. For example, whether it was grain spirit as made in this country, or potato spirit made abroad, or anything of that kind?—Yes, or Marc spirit.

17766. The form in which you reported in those cases was, for example, in 1904, in the Colne case, that the spirit was ascertained to be a mixture of pot still grape spirit and neutral spirit, the latter being 25 per cent.—I presume you would say approximately 25 per cent., would you not?—That is all —the merest roughest approximation.

17767. Similarly in the next case at Hamilton, in the same year, where the neutral spirit was estimated at 75 per cent.?—Yes.

17768. Have there been any instances out of these 18 in which you were satisfied from your examination of the sample that it was genuine spirit derived only from wine?—We could not say that. I do not think there is a single case in which I could say that. The only misgiving I had was in a case which was recently tried at Maidenhead. The substance sold at Maidenhead certainly differed from a typical Cognac, and contained a quantity of silent spirit, but whether that silent spirit was or was not derived from the grape we were not able to affirm.

17769. In the ordinary cases the neutral spirit would probably be a grain spirit, would it not, or a highly rectified spirit?—It might be. It might be a potato spirit, or a beetroot residue spirit rectified. In any case it probably was a clean spirit.

17770. (*Dr. Adeney.*) I take it according to the French law if it had been wine patent still spirit it would be legally designated eau-de-vie de vin?—That is so; that, I imagine, was the case with this brandy spirit, but I have not absolute proof of it.

17771. (*Dr. G. S. Buchanan.*) The estimate of the proportions of neutral spirit or silent spirit in these samples was based on the limits suggested by Girard and Cuniasse?—That is so. Brandy not being a product of this country, we have no knowledge of our own. It is not as in the case of whiskey where we can authenticate the samples, and we know about their history, but as long as this kind of brandy is not produced here we have not the same means of control, and therefore we have gone to the French authorities and accepted them.

17772. That is to say, the working standard is 300 milligrams of total secondary constituents, and 80 milligrams of esters per 100 cubic centimetres of absolute alcohol?—That is so.

17773. I presume that the amount of the sample that is available in these cases of reference is not enough to enable any very elaborate determinations to be made in addition to these determinations that you have mentioned?—That is so. It is, of course, only a third of the amount purchased, and the amount purchased as a rule is only that which an ordinary purchaser would obtain.

17774. In any case, on the assumption that brandy should be derived from the distillation of wine, the general effect of your examination was that in these samples the allegation that they were not brandy was correct?—Unquestionably in some cases it was correct, in other cases we were, so to say, agnostic. We simply said a certain quantity of silent spirit was there, but whether that was derived from grapes or not we could not say.

17775. Could you say certainly that some of the spirit was not derived from pot still distillation?—Yes, in some cases.

17776. You have given us a table in Appendix I. which will give us the actual analytical figures in these brandy cases?—Yes.

17777. Is there anything you would wish to point out to the Commission on that table?—No, they are the usual conventional figures which are obtained on examination.

17778. You have had some samples of rum referred to you in the same way by magistrates?—Yes, but always for strength, or nearly always. There was one case where the spirit was alleged to contain ginger wine, and we found that it did. In all other cases the allegation was for deficiency of strength.

17779. And the same in the case of gin?—The same in the case of gin. We had only six samples from 1893 onwards, and they were all for strength.

17780. Samples of alleged potheen, and other illicit spirits, and fraudulent dealings in spirit sometimes involve the examination of the spirits for secondary products—that is in the work of your laboratory for the Excise?—Yes, merely to identify the spirit.

17781. The identification of a spirit by analysis is, I take it, a much more definite matter than deciding on an unknown sample for the purpose of a case under the Food and Drugs Acts?—That is so. As a rule there is no difficulty whatever in substantiating or disproving the allegation as to identity. Methods of analysis are quite able to overtake that point.

17782. That will apply not only to whiskies but to brandies?—Oh, yes, equally.

17783. A few samples of whiskies occasionally come to you in connection with Government contracts, do they not?—They do. I will hand in to the Commission a series of analyses of typical high-class whiskies which are purchased under Government contracts, usually for hospital purposes—in one case for the House of Commons.

17784. These whiskies, of which you give us the analyses in Table II., would be blended whiskies, would they not?—No, there is an Irish whiskey, which is probably a self whiskey.

17785. And as regards the Scotch whiskey, would that be mainly pot still malt whiskey?—They would be all pot still malt whiskies.

17786. Entirely?—Entirely. They might be blended.

17787. That one can infer analytically from the high figures of the higher alcohols and esters?—Yes. The Irish whiskey is very remarkable for the large amount of secondary constituents which it contains. There are upwards of 1,000 milligrams per 100 cubic centimetres of absolute alcohol.

17788. (*Dr. Adeney.*) That is very exceptional?—Yes, it is very strong pot still whiskey.

17789. (*Dr. G. S. Buchanan.*) Do you happen to know if the contracts in these cases specify that they should be pot still whiskies?—I do not know that they do. As a rule the contracts go to firms of established reputation. I have very little doubt that they are high-class whiskies, although I will not say in all cases they are self whiskies. Occasionally some of the Scotch whiskies may be blends.

17790. Blends of malt whiskies?—Yes.

17791. Then at the other end of the scale you had some samples referred to you of British spirit which had been exported to the Colonies or foreign countries, and are alleged to have been adulterated or to be deleterious to health by being of too impure a character?—Yes, we have had two such cases, both of which came to us through the Colonial Office. One of them consisted of samples which were obtained from Hong Kong, and the other case consisted of samples which were obtained from the British West African Colonies.

17792. You have kindly supplied us with your Reports in Appendix III. and IV. of those particular analyses?—Yes, I have handed in copies of the Reports which were sent to the respective Governors.

17793. As regards the Hong Kong spirits, I see that some of them, samples "A" and "B" consisted of both patent still and silent spirit, with an admixture of genuine pot still whiskey, and in your view were very similar to what is usually sold in public-houses in this country as whiskey?—That is so.

17794. The whiskey was not apparently of good quality from a commercial point of view, but the total percentages of "fusel oil impurities" and the proportions of furfural and aldehydes present were considerably less than are generally found in genuine Scotch and Irish pot still whiskies of a high commercial quality?—That is so.

17795. Then the samples "C," "D," and "E" were practically wholly patent still or silent spirit which was coloured and flavoured to imitate brandy and whiskey?—That is so.

17796. Were those samples "C," "D," and "E" foreign spirits?—I do not know of my own knowledge, but they were alleged to be German. They were probably in that case potato spirit, coloured with caramel, or possibly in one case a slight quantity of coal-tar colouring matter.

17797. There was nothing which led you to consider that these brandies and whiskies, although in some cases very poor in quality were in any case of a specially deleterious character?—No, there was nothing hurtful in them as such apart from the quantity which might be drank. There was nothing hurtful in the quality.

17798. With regard to the West African samples which you give us in IV. I think you had samples from Lagos, and Gambia and Sierra Leone?—Yes.

17799. One sample I see which was the poorest and best rectified corresponded very closely to English patent still spirit, and the others had more the character of a commoner class of spirits imported from Hamburg and other Continental ports?—That is so.

17800. When you refer to the spirit being imported from Hamburg, do you mean imported solely for the purpose of this particular trade, or was it imported for consumption in this country?—Oh, no, for this particular trade in West Africa. This class of whiskey does not come into this country.

17801. Then the samples marked rum and gin consisted, or several of them consisted, of patent still spirit diluted and mixed with traces of artificial flavouring, and in some cases coloured with caramel?—That is so. They were wholly fictitious.

17802. Would the patent still spirits in that case be comparable to a new grain whiskey?—They would be German spirits, probably potato, or possibly grain, or possibly from beetroot residues.

17803. We had some evidence from a trader who exported rum to West Africa, and apparently it was an ordinary new patent still grain spirit that was exported as rum from this country?—As sent out from this country it probably would be, because we do not make potato spirit.

17804. These samples of rum and gin are regarded as fictitious, inasmuch as they were almost devoid of the special character of rum and gin?—Yes.

17805. In fact, they were inferior to what would be found in the commonest classes of public-house in this country?—That is so, as regards rum. Gin, in a sense, is nothing but pure alcohol of any origin you like flavoured, and the gin in this case would be very similar to gins which were to be found in this country. As regards rum, certainly not.

17806. Then there were other samples which appear to be somewhat more genuine, do they not? There were some samples of rum and gin which were mixtures of pot still and patent still with a large preponderance of the latter, but which you considered to be of an inferior commercial quality?—They were; some of them were very similar to spirits we can find in this country—they were probably new spirits—and the alcohol had not been aged at all.

17807. You had some samples also of absinthe and anisette. You found those to be diluted patent still spirit strongly flavoured with aniseed?—Yes.

17808. It was a clean and well rectified spirit?—Yes.

17809. While the great bulk of these samples, considered from a commercial and potable point of view, were of a distinctly inferior class, and have either been imperfectly rectified or have in some instances been prepared from crude or residual saccharine materials naturally yielding a rather harsh spirit, you did not find in any of the samples anything except small quantities of flavouring and colouring matters in addition to more or less of the bye-products always present to some extent in commercial spirits?—That is so.

17810. Therefore you did not think there was any special toxic property in these spirits, apart from the ethyl alcohol?—No.

17811. The table appended to your Appendix IV. shows the actual figures obtained?—That is so.

17812. Then as regards the pot still and patent still spirit, you refer us to the analyses which were made in the Government laboratories some years ago for the Select Committee of the House of Commons in 1890-91?—Yes, those are already published in the Blue Book.

17813. Then you have made periodical analyses and examinations of the spirits sold to workmen in the low class neighbourhoods of various cities and districts owing to allegations of their deleterious or poisonous character?—Yes.

17814. What sort of allegations would those be, and how would they be received?—From time to time we get representations made (usually by temperance associations) as to the character of the spirits sold to the poor and the working classes, and at fairs and other places where large numbers of the poor people congregate, and from time to time we have tested these allegations. The Board of Inland Revenue has, if they thought a *primâ facie* case seemed to have been made out, ordered samples to be collected by their officers in the districts where these malpractices were alleged to go on. A pretty extensive series of investigations have been made in consequence of an undertaking, I understand, by Mr. Guillemard to this Commission to obtain such samples.

17815. (*Mr. Guillemard.*) Yes, that is so?—The results of these investigations, which have extended over the United Kingdom, are before you in the Appendix V. We have summarised the result of the enquiries in a synoptical table in the first instance, and then we have given a general statement following it, and I have also given here the actual analytical figures which have been arrived at in each particular case.

17816. (*Dr. G. S. Buchanan.*) For each country?—Yes, each whiskey and each country.

17817. I am sure these analyses are very helpful to the Commission. I see, from the synoptical table to which you refer, that the samples in question were for the most part patent still spirits, or patent still spirits with a comparatively small proportion of pot still spirit?—In the case of England, for example, we examined 38 samples collected by our officers. Of these we inferred that 6 were entirely patent still spirits; 18 were patent still spirits with, probably, not more than 10 per cent. of pot still; 8 of them were blends of patent still and pot still containing probably not more than one-third pot still. Four of them were blends of approximately equal parts of patent still and pot still; 2 of them contained approximately three-parts of pot still to one part of patent still, and in no case was there a pure pot still

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spirit. That is as regards the English samples. As regards the Scotch samples, 23 samples were received by us; 2 of these were probably entirely patent still spirit; 15 of them contained probably not more than 10 per cent. of pot still spirit; 3 were blends containing not more than one-third of pot still; 3 of them were blends containing approximately equal parts of patent still and pot still, and in no case was it pure pot still. In Ireland the results are somewhat different. We got from Ireland 30 samples, of which 8 were probably entirely patent still; 3 contained about 10 per cent. of pot still; 5 contained not more than one-third pot still; 1 was a blend of approximately equal parts of patent still and pot still; 4 contained 3 parts of pot still, and one part of patent still, and 9 were pot still.

17818. The principle on which these samples were collected was to take them from the bars at fairs and public-houses in particular quarters, where it was supposed that the spirits sold would be the cheapest kind of spirit that the publican would be likely to get?—That is so; in England and in Scotland, I think the practice was to get the spirit from low-class neighbourhoods and low-class public-houses. In Ireland they were largely purchased on the occasion of fairs.

17819. That is, of course, an occasion when a man would sell a whiskey without any particular regard to the reputation that he might get for selling bad whiskey. He would simply want to get rid of the largest possible quantity, whatever he had?—You are speaking of Ireland?

17820. Yes?—Yes, probably so.

17821. (*Dr. Adeney.*) I take it, Dr. Thorpe, from your analyses, that we may rest fairly satisfied that the spirits sold in low class public-houses, and at fairs in Ireland, are not injurious?—Certainly. All the allegations that are made as to vitriol and sulphate of copper, and salt, and all these sort of things are absolutely, so far as we can discover, without any foundation.

17822. (*Mr. Guillemard.*) That may be said to be the summary of the enquiry on this subject, may it not?—It may, and it is a corroboration of what we found on previous occasions.

17823. (*Dr. Adeney.*) It is sufficiently widely extended to enable you to feel assured that that holds generally true for the trade in Ireland?—Certainly. As regards Ireland, perhaps I may hand in, to illustrate how extensive the enquiry was, this map of Ireland which shows you where the various samples were obtained. (*See Appendix R.*) I think that they were obtained with the view of finding out as far as we were able whether there was any foundation for the statements that were made.

17824. Perhaps you will allow me to remark that this allegation is very general in Ireland, but there can be no doubt that if vitriol is added it must be by the retailer. I know of a case in which a gentleman some years ago asked for some whiskey that was being sold to some village people, and he was refused that particular whiskey, but he was offered another whiskey, and on pressing the publican for the reason, the publican admitted to him that vitriol had been added to this particular whiskey that he wanted. The local authorities could deal with such a case. What I want to draw out is this, that the whiskey supplied to publicans in Ireland is of a non-injurious character, or, at all events, not of a specially injurious character?—So far as the samples that were obtained from our officers, and I am sure with every desire to find out if anything was wrong, could show; we have not found any substantiation of the allegations.

17825. It is said by the country people with regard to the whiskey that is sold at fairs, that anything that remains over at night time is thrown away?—I daresay it is, but intermediately I should imagine.

17826. The impression in Ireland is that it is directly thrown away. I am very glad you have been good enough to get these analyses, because I think they absolutely discredit the idea that necessarily injurious whiskey is sold at any rate by wholesale merchants to the Irish publicans?—I think they do.

17827. (*Mr. J. Y. Buchanan.*) Dr. Adeney, in putting a question to you, said that if there was anything injurious, it was added by the publicans, but I understand your evidence goes the length of saying the publicans do not supply anything that you can positively say is injurious?—We can get no evidence.

17828. (*Dr. Adeney.*) I should like to say that I do not think the publicans as a class do adulterate whiskey in this way, and that if there is any queston of specially injurious whiskey being sold at a fair it is the result of an adulteration by an individual retailer, if the allegation is a true one?—Take the special case of methylated spirit. There is no allegation more frequent than that, and there is no aspersion on the character of the Irish whiskey that the revenue officers would be more down upon, apart from any question of public health, than the illicit use of methylated spirit. We have never been able to find any evidence of the use of methylated spirit as whiskey.

17829. (*Dr. G. S. Buchanan.*) The allegations that the spirit sold at fairs is particularly objectionable appears to have no warrant in any addition of any of the adventitious substances which you have spoken of?—That is so.

17830. There is sometimes a complaint of such spirits that they are particularly fiery, particularly thirst-producing and liable to give headaches, and so forth. So far as your examination goes it will show that these are in the great majority of cases—not entirely because we have had the Irish exception—new patent still spirits?—In Ireland, do you mean?

17831. No; in the great majority of these cases that you have given us here in England and Scotland you say the majority of samples are new patent still spirits with, at most, a small admixture of pot still spirit as flavouring?—They probably are new, but how new I am not in a position to say. I do not know how long they have been in the cask, but naturally from the prices they are retailed at there is not a considerable amount of capital locked up before it is turned to account in the sales, so the probability is that they are not very old; but they may still be old enough to be sufficiently good to be consumed, because, as I have pointed out to the Commission, I think there is a great deal of exaggeration in the statements that are made as to the beneficial effects of the ageing of whiskey.

17832. As regards those samples of spirits which were taken at these fairs and public-houses, the only purely pot still spirits were those that you have told us of that were sold in Ireland. I think you found that six of these were of fair quality and that two were new and raw, and one which give the analytical data of a pot still spirit had a peculiar flavour and was coloured with coal tar dye. That was the account of the pot still spirits?—Yes.

17833. Nearly all the samples were artificially coloured, and the colouring matter in most cases was caramel?—Yes.

17834. Occasionally in samples you told us of there was a yellow coal tar colour used?—Yes, that was so.

17835. Then the spirits which were sold in these circumstances as Irish whiskey in England and Scotland were as a rule more highly coloured than those sold as Scotch whiskey?—That is so. There is an idea in England that the Irish whiskey is necessarily very highly coloured, and, of course, that opinion is pandered to. As a matter of fact, Irish whiskey in Ireland is nothing like so highly coloured as Irish whiskey sold in England—that is, as a rule.

17836. In some of these cases where the samples were new patent still spirit with at most a small admixture of pot still spirit as flavouring, the colouring was practically the only difference between what was sold as Irish and what was sold as Scotch whiskey in Great Britain?—That is so.

17837. The majority of these samples were bought from the stock of spirits at the bars and counters?—They would be what would be retailed over the counter.

17838. Some of them were bottled and labelled?—A few.

17839. Were those any higher in quality?—No. Some of the labels were distinctly misleading.

17840. You give an instance here which you number 33—a sample purchased in Glasgow and described on a gold label as "Extra special old Scotch whiskey thoroughly matured"?—Yes, that is the bottle and the label. (*Producing same.*)

17841. And in fact it appeared to be a new patent spirit coloured with caramel?—That is so.

17842. Then there were two Irish samples where the bottle was labelled "First quality Irish whiskey" and "Pure old whiskey distilled in Ireland from home-grown barley and malt." They were also new patent still spirits, were they not?—They were.

17843. With, at the most, a slight flavouring of pot still?—Yes.

17844. Then eight of the English samples, three of those purchased in Scotland, and six of the Irish samples were found to be under the legal limit of strength. In one or two of these cases the strength is only slightly deficient, but in the majority the strength was from 3 to 6 degrees, and in one case more than 10 degrees of proof strength below the Food and Drugs Acts limit of 25 under proof?—That was so, but in many cases I do not mean to imply that there was any conscious attempt at fraud in this. It was merely an error in breaking down the strong spirit—miscalculation by carelessness in the amount of water which was required to bring it to legal proof—that is, in many cases which are already referred to in Appendix I. It is perfectly obvious from the comparative nearness of the number of the legal strength that these arose simply from carelessness or blundering or imperfect determination of the hydrometrical strength, and that it was not really an attempt at fraud.

17845. (*Mr. Guillemard.*) Were there notices in those places where those spirits were sold?—I do not know.

17846. (*Dr. G. S. Buchanan.*) This is the actual bottle that you refer to as No. 33?—Yes.

17847. Then as to the price at which the spirits were sold, they seem according to your table to vary within pretty wide limits, but on the whole you think they were similar in all parts of the country?—I do not think they vary within very wide limits. I think for the class of whiskey that is sold the limits are rather narrow. I think the class of persons who buy this class of whiskey have got their own standard of price connected with it, just as they have a standard of price with regard to tobacco or anything else of that kind. They know perfectly well what they ought to pay for the bread or the sugar which they buy, and any attempt to tamper with that price is very strongly resented, and so it is in the case of whiskey.

17848. These prices range from 1s. 6d. a pint to 3s. or more. I do not know that there are many over 3s., but there is one at 3s. 6d.?—I say that the prices at which the spirits were sold appear to be very similar in all parts of the country, the average being about 2s. 4d. a pint, equivalent to 18s. 4d. per gallon.

17849. (*Dr. Adeney.*) Do you think the prices charged were fair in the great bulk of the cases?—Yes, I think so.

17850. I only see three or four where I should think the charge was a little exorbitant?—No, I think in the main they get value for their money.

17851. That would seem so from your list. I notice in the case of sample No. 117 that that was charged at the rate of 3s. 6d. per pint. I take it from your analysis that was not a pure pot still?—That is an Irish whiskey; that would be a blend, and from the amount of total secondary constituents probably something like equal parts of pot still and patent still.

17852. 3s. 6d. for that would probably be a little high?—Yes, that was distinctly high. That was in county Clare.

17853. (*Dr. G. S. Buchanan.*) Some of these whiskies would be practically patent still spirit or patent still spirit with a very small proportion of pot still worked out I think to a price equivalent to about 3s. a bottle. Would that be not an exorbitant price?—No, I think not. I think it is a fair price.

17854. In some cases they are a little more, but I have not calculated them out in detail?—The first column gives purely the actual prices, and you will see that they do not vary very largely.

17855. It is a little difficult to compare them without working out the strengths, is it not? They seem to vary considerably in strength?—The strengths run fairly uniform. They are from about 40 in absolute alcohol to about 44 or 45 at the outside. There is one Scotch whiskey at 47, but as a rule they range from 40 to 45 of absolute alcohol.

17856. There is one whiskey No. 66 which is as low as 36·85. That is a Dundee whiskey, and that was 2s. 4d. a pint?—Yes. There was one from Dundee 36·85, say 37 per cent. absolute alcohol.

17857. That would appear to be of the grain spirit class?—That would be a blend, certainly The probability is that the whiskeys obtained at fairs tend to be a little higher than the normal kinds, but those which are bought in the ordinary way of retail sale over the counter are fairly normal in character, but on the occasion of a fair I daresay they would put the price up.

17858. (*Dr. Adeney.*) You do not support the opinions which have been given before the Commission by other witnesses that the sale of patent still spirit is really induced by the consideration of greater profits. The suggestion has been made that the publican, or someone, has really benefited, but not the consumer?—There is no doubt whatever that the sale of patent still spirits does leave a little wider margin of profit to everybody concerned. Of course the manufacturer gets it, the wholesale trader gets it, the blender gets it, the retailer gets it, and the consumer to some extent gets it.

17859. He gets a cheaper spirit?—They all participate in the reduced price of the patent still as compared with the pot still. In what ratio they benefit is a matter that is rather difficult to determine.

17860. But speaking generally the consumer does generally get some benefit?—He does get a proportion of the benefit no doubt.

17861. (*Dr. G. S. Buchanan.*) The difference in price between pot still and patent still whiskey makes a very considerable difference to the man who supplies the publican?—Oh, yes, there is no doubt that pot still is more costly to produce than patent still.

17862. We had evidence in the direction of showing that some publicans are practically tied to particular people for their spirit, and if that is so the publican would naturally have to take the whiskey that was given to him?—No doubt, and that is so in every tied house, of course.

17863. And the man who supplied him with whiskey in those circumstances and wanted to make the best profit would naturally lean towards as much patent still as he could?—Yes, as much as he could get his clients to take.

17864. Then you also obtained a few representative samples of old and new spirits from pot and patent still distilleries, the details of which you give in Appendix VI. and VII. The first gives a table regarding the spirits from the pot still distilleries, and I think you found that the examination of a number of representative samples shows very clearly the broad distinction analytically between the pot still and the patent still whiskies?—That is so. If you take representative samples of each case there is no doubt that analysis shows very marked difference between them.

17865. (*Dr. Adeney.*) Do any of your samples of the patent still spirits include the best Scotch grain whiskies?—Yes, in this table there are some.

17866. None of your analyses as far as I have gone over them suggest an overlapping between the pot still and the patent still?—No; they are typical representative ones.

17867. Therefore the patent stills containing the highest quantity of secondary products are always below the pot still containing the lowest quantity of secondary products?—Yes, that naturally tends to be so. The patent still distiller tends by his operations to make pure alcohol, whereas the pot still distiller tends to put in practically all the bye-products which are produced.

17868. We have had some analyses submitted to us of patent still and pot still whiskey, which indicate an overlapping, that is to say, the highest patent still has been higher than the lowest pot still?—That can happen, of course. A man can so arrange either in his distillery or the produce of his still to produce a product of that kind.

17869. It is an exception in your experience?—It is an exception.

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17870. (*Mr. J. Y. Buchanan.*) I suppose the object of making patent still whiskey and selling it as patent still whiskey is because a number of buyers prefer the patent still whiskey. If there was not a market for it the distillers would not make it?—No, there is no doubt about that. Of course they would not make that which they knew would not sell.

17871. In a blended whiskey, a whiskey which is not either a pure pot still or a pure patent still, I suppose there is no reason to consider the proportion of patent still whiskey as an injurious ingredient any more than the proportion of pot still?—On the whole, speaking for myself personally, I rather incline to a patent still product with a moderate amount of those ingredients which are characteristic of whisky. That is my own personal liking, but that s an individual preference. But it is a question of taste, and on the principle *de gustibus non disputandum* I have no wish to dogmatise.

17872. (*Dr. G. S. Buchanan.*) Taking these data that you have given us in your Table VII. the patent still contained as a rule no furfural when new, although after storage in wooden casks it is sometimes found to contain traces of this substance?—That is because the casks have already contained spirit, and the new spirit is soaking out the products from the cask.

17873. The low percentage of higher alcohols and the absence of all but mere traces of furfural render it a comparatively easy matter to distinguish patent from pot still spirit, but the variation in the amounts of the secondary constituents in both classes of spirits renders it less easy to estimate the exact proportion of each kind of spirit present in mixtures?—That is so. That can only be very approximately estimated on account of the variable character of the pot still spirit. The patent still is much more uniform in character.

17874. In the bye-products?—In the proportion of bye-products.

17875. Speaking generally the Scotch whiskies showed a somewhat less total amount of secondary bodies than the Irish, and the Speyside, Banffshire and Highland samples rather a smaller amount than the Islay and Campeltown samples?—That is so.

17876. You have got some comparisons between the ordinary patent still spirits with spirits of high strength, British and foreign, which are not usually stored in wooden casks but metal drums or vats, in regard to secondary constituents?—Yes.

17877. The effect was that the patent still spirits underwent some slight changes, and the high strength spirits did not?—Very slight, but in any case the amount of change when kept in a metal drum is very very small, whether it be high or whether it be low in strength. The changes which take place in spirits are traceable to the influence of the cask—that is, in the main.

17878. And is that change noticeable in the patent still spirits as well as in the pot still spirits?—Yes, *pro rata*, but of course there is a very much smaller quantity of the products to be changed in the patent still than in the pot still, and therefore the influence is not apparently so marked.

17879. You mention that in the case of the pot still spirits the absorption of the secondary products by the casks is to some extent selective?—Yes. What happens is that when you store whiskey in a cask there are two concurrent operations which may go on. In the first place if the cask has been previously used the whiskey begins to dissolve out the products with which the wood is saturated, and also there is a process of osmotic transpiration of alcohol through the wood. The wood is a porous material. The alcohols go through the material of the wood at different rates depending on their specific viscosity. Ethyl alcohol is by far the least viscous. It is the most mobile of the whole, and it goes through the cask much more rapidly than the other alcohols do, and an evaporation takes place from the outside. The consequence is that the whiskey shows a gradual decrease in ethyl alcoholic strength, and in consequence of the disturbance of the relation an apparent increase in the amount of the higher alcohols.

17880. (*Dr. Adeney.*) That is simply concentration?—That is all. The quantity of higher alcohol is simply concentrated by the abstraction of the ethyl alcohol.

17881. Could you tell us about oxidisation changes?—They are very slight. Shall I deal with that question now.

17882. Yes. As you have already given us some information on that point we might go into that?—That is dealt with in Appendix IX.

17883. (*Dr. G. S. Buchanan.*) Before we go further into the question of ageing, perhaps you would kindly give us a little more information with regard to these spirits that were tested from pot distilleries. I understand they were a series of representative and high-class distilleries. You have given us a table and we shall be very glad of any specific points that you could draw our attention to, such as the question of treatment in regard to aldehydes which you mentioned in one case?—The first six whiskies are all high-class Scotch pot still whiskies. They are, for example, Glenlivet Speyside whiskey, Banffshire whiskey, Islay whiskey, Campbeltown whiskey and Skye whiskey. They are all fairly uniform in character. They range in alcoholic strength from 60 to 63 per cent., and the total quantity of the secondary constituents may be taken at about 550 milligrams per 100 cubic centimetres of absolute alcohol up to a maximum of 755, which was the Speyside whiskey. As regards the higher alcohols, they are fairly uniform. As regards the amount of furfural, too, they are also pretty uniform—three to four parts per 100 cubic centimetres of absolute alcohol. The greatest variation is in the amount of acetic aldehyde, but irrespective of that they are fairly similar both in alcoholic strength and in general character.

17884. Is there any significance with regard to that variation in aldehydes?—Not much, except the age. In the new ones the amount of acetic aldehyde tends to be at its minimum. The acetic aldehyde tends to be increased with the age. A certain quantity is apparently oxidised and the alcohol is oxidised in the direction of aldehydes, and no doubt would ultimately tend to be converted into acetic acid—aldehyde being a kind of intermediate product between alcohol and acetic acid.

17884*a*. And the acidity has increased in the case of the older?—You will find a better parallelism (there are exceptions) between the volatile acidity and the amount of aldehydes. Where the conditions are such that aldehyde is formed a considerable quantity of acetic acid will be produced.

17885. That is as regards the first six samples in VI. With regard to the samples below, are there any points to which you wish to refer?—The others are all pot still whiskies of Irish origin. One of them, marked 376, is a whiskey obtained from an Irish distillery which had been treated by what is known as Dr. Hewitt's re-agent. Dr. Hewitt suggested the application of phenyl hydrazine sulphonate, at first, I believe, of sodium and eventually of calcium, as a re-agent which would abstract the aldehydes, not only ordinary acetic aldehyde but every aldehyde, including furfural.

17886. With the object of accelerating maturity?—What was supposed to be maturity—in other words, to deprive the whiskey of what was alleged to be its most deleterious constituent. You see the influence of that treatment in the analysis of this sample of whiskey.

17887. The aldehyde figure as acetic aldehyde is 8·7?—And the furfural is very low.

17888. The furfural is reduced to 0·1?—Yes.

17889. (*Dr. Adeney.*) That sample is, I suppose, comparable with the preceding one of No. 375?—Yes, one was treated and the other was not treated. They would not be necessarily made at the same time, but it was the same distillery and generally the same process was used.

17890. (*Dr. G. S. Buchanan.*) Are the samples below No. 376 also Irish pot still whiskies?—All the remaining ones are Irish whiskies.

17891. There is an Irish whiskey, for example, No. 323, which has a very low aldehyde figure—1·6, which is lower than sample 376?—This is from one of those distilleries that I alluded to where they use an apparatus to obtain a modified whiskey. They tried to produce a kind of whiskey which would be similar to a blended whiskey. In this particular distillery the

wash is run through a Coffey still column and the low wines and feints are distilled in a pot still. The apparatus is a mixture of the Coffey still and the pot still.

17892. (*Dr. Adeney.*) The secondary constituents are generally low compared with the other Irish samples?—In this particular one.

17893. The total is only 418?—Yes, the effect of that has been to make a whiskey very similar to a Scotch pot still or even a blended whiskey.

17894. Your results are extremely interesting, because they seem to show that as a matter of fact the secondary products are higher in Irish whiskey than in the Scotch whiskey?—They tend to be. That is characteristic of Irish whiskey.

17895. Does taste follow the quantity?—Yes.

17896. Are they more highly flavoured than the Scotch whiskey?—Yes, much more highly flavoured, and very distinctive in character.

17897. It has been suggested in evidence that some of the Scotch pot still whiskeys are made as highly flavoured as possible so as to allow of their being blended with a patent still?—That is so in some cases where a man is making blending spirit. Some of the Scotch distillers make a whiskey solely for the purpose of blending.

17898. Are these Irish whiskies made for blending or for sale as self whiskies?—They may be both. They are of the character, for example, of that high-class whiskey which I told you of, but I should say the greater number of them are probably for blending. People do not like them (if I may say so) quite so heavy as this, and there is more or less of a silent spirit added to them.

17899. (*Dr. G. S. Buchanan.*) Then we may compare that table VI. with table VII.—spirits from patent still distilleries?—Yes, they are strictly comparable.

17900. The contrast as regards the secondary products is generally very marked?—Yes, the total amount of the secondary constituents is relatively very small. The furfural is extremely low, and sometimes not a trace of it can be detected. In those particular samples I give here the maximum is not more than three-tenths of a milligram per 100 cubic centimetres, and the aldehydes, as acetic aldehydes, are very small.

17901. (*Dr. Adeney.*) Is the usual furfural test as usually performed as sensitive to the patent still spirit as to the pot still spirit?—Yes, it is a very sensitive re-action. Of course, it does not give the intense colour, but in some pot stills the colour is so intense that we have to dilute it down very considerably to get a manageable reaction.

17902. Is that due to the quantity of furfural present or do the higher alcohols influence the reaction?—No, to the quantity of furfural.

17903. (*Dr. G. S. Buchanan.*) Were the patent still whiskies in this table from Scotland and Ireland closely similar and of the same character?—Yes, there is not very much distinction between them. There is only one Irish patent still as a matter of fact. All the rest are Scotch. There are among the Scotch whiskies examples which are very similar to those of the Irish.

17904. I suppose from the point of view of the work done in your laboratory you would ordinarily find that the patent still spirit produced in both countries is practically an identical product?—Very similar.

17905. Then you have some other tables with regard to foreign and other spirits of high strength, and the figures are given in table VIII. These are British spirits from molasses, and highly rectified British spirits from grain, and crude British spirit from molasses, and then there are three examples of foreign spirit imported from Hamburg?—Yes.

17906. Could you compare those at all with each other or with the patent still grain spirit?—No. They approximate in character to some of the patent still spirits, but of course they are cleaner spirits. There is a British spirit from molasses, for example, which, with regard to the total amount of secondary constituents, is very similar to what you have had.

17907. With regard to the foreign spirit imported from Hamburg, is that a grain spirit?—I cannot say definitely, but presumably it is potato spirit. It is a very clean spirit.

17908. A very small proportion of secondary products?—Very. Of course, that is spirit which is made probably from potatoes. All these spirits are used for industrial purposes.

17909. Even the British spirits of high strength?—Yes, and of that origin. In all classes of British spirit so made, as well as foreign spirit imported, it is usually for the manufacture of methylated spirit or other industrial alcohol.

17910. To complete this section of your evidence. Where brandy and rum are concerned you cannot give the results of analyses of many samples whose origin is well authenticated, that is analyses in your laboratory?—That is so.

17911. But you refer us to tables of analyses of brandy which appear in Girard and Cuniasse, and from these tables it appears that brandy, like pot still whiskey, varies considerably, both as regards the total secondary constituents and in each of the other constituents?—That is so.

17912. In the case of rum you refer us to analyses of genuine Jamaica rum in the "Journal of the Society of Chemical Industry," Volume 26, for March, 1907?—That is so.

17913. You draw attention in the case of rum to the large percentage of esters that is usually present, and to the very great variations which may occur in the amount of esters?—Yes.

17914. That is in part due to the fact, as I think we have had evidence already from Jamaica, that Jamaica rums may be divided like pot still whiskies into drinking and blending rum?—That is so.

17915. The blending rums being sent mainly to Hamburg to prepare artificial rum by mixing with neutral spirit?—That is so.

17916. The rums from the other West Indian islands and the Colonies contain less esters than Jamaica rum, and in many cases are produced in patent stills?—That is so.

17917. Then with regard to gin could you give us any analyses of the spirit which is used in the manufacture of gin?—No.

17918. Would any of these British spirits come from grain, for instance?—Any clean spirit may be used for gin, no matter what its origin is. The molasses spirit can be rectified, so as to be quite suitable for the manufacture of gin.

17919. Have you any experience of pot still distilleries for gin in Holland?—No.

17920. Some analyses of these gins appear in Table IV., which we have already had?—Yes.

17921. Those analyses that we had in the table dealing with West African spirits would be typical of ordinary gins, to some extent, would they not?—Yes, I should think they would; a low class gin, certainly.

17922. (*Dr. Adeney.*) Have you any working standard for rum in your laboratory as you suggest for brandy and whiskey?—No. I do not quite understand why we should have a working standard.

17923. For guiding your own judgment as to whether rum is genuine Jamaica or Demerara, or a mixture with patent still spirit?—We formerly did attempt a definition, but when we had information sent to us mainly from Mr. Harrison from British Guiana, and also the results which were furnished to us from Jamaica, we rather deprecated drawing any inference on standards, because we found even the perfectly authentic and typical specimens varied so widely in their composition that it was quite impossible to draw any inference.

17924. (*Dr. G. S. Buchanan.*) You have also made an analysis which you refer to in Table IX., of samples which have been taken from the same cask of spirits at intervals of six months during the last six years?—Yes. These are rather interesting. These are, of course, authentic samples which we have been able to test, and about the character of which we have no doubt at all. The samples were obtained from a distillery in Perthshire by one of our officers, and they bear out what I have already indicated, namely, the general changes which come over a whiskey on storage. The analyses were made at intervals of about a year, or, in some cases, six months. It will be noticed, for example, that the

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amount of absolute alcohol to begin with is at its maximum 68·7 per cent., and that as time goes on it progressively diminishes in amount until at the end of 7¼ years, which was the last examination that was made, the amount had sunk from 68·7 to 59·2 of absolute alcohol. The colour originally was nil, it was water white, but at the end of 7¼ years, in contact with the cask, it had obtained a faint sherry colour. Now as regards the non-organic solid matters in solution it was pretty uniform. As regards the volatile acids it was observed to be pretty uniform. There was no increase in the amount of volatile acids, or sensible increase, during the whole of the time. The amount of acetic acid was determined, and there is practically no increase after the first year. There was a very slight increase, and then the amount is practically uniform—something between 17 and 18 milligrams per 100 cubic centimetres of absolute alcohol.

17925. That is volatile acid as acetic acid?—Yes, calculated as acetic acid. Also you notice that the aldehydes tended very slightly to increase, but not to any very marked extent. The amount of acetic ester also tends very slightly to increase. The amount of higher alcohols, as I have already explained, shows a marked increase, but that is really due to the loss of the ethyl alcohol. The amount of furfural is remarkably constant. To begin with, it had very little—at least it had none that we could detect—and then afterwards by contact with the cask for about six months a very small quantity was to be found, and that seemed to be perfectly uniform throughout the whole time.

17926. Was this pot still whiskey in any way unusual?—Yes. In one case it had no furfural, or a very small amount of furfural, and the aldehyde figure seems to be rather low, although it did ultimately increase from 3 to 6. It was treated by Hewitt's method, that is to say, the furfural and the aldehydes then present were taken out.

17927. So you started with a low aldehyde value?—Yes, but very little aldehyde was manufactured and no furfural.

17928. That, of course, was rather an advantage from the point of view of ascertaining the effect of age in that particular matter?—Yes. Now the next one is also from the same distillery, and very much the same kind of thing goes on as regards the gradual evaporation of the alcohol, and the formation of the acetic acid is very similar. There is a very slight tendency to increase—but very small. There the amount of furfural which originally when new was about 3·3 milligrams per 100 cubic centimetres remained practically constant—a very slight increase, if it could be called an increase, but it was practically constant throughout the history of the sample, namely, the 7¼ years over which the observations extended.

17929. And the aldehydes in that case, as acetic aldehydes, began at 21·8 when the whiskey was new, and was 24·9 after being six months in cask, and then gradually increased up to 36·8 in seven years?—Yes, that is so. But may I point out the *pro rata* increase is very similar in the preceding case?

17930. That I understand. In this case the original whiskey had not been treated by Hewitt's process?—No.

17931. (*Dr. Adeney.*) Did you make any test as to variation in flavours?—No. I do not know whether Mr. Proctor, who examined the whiskies, is able to say.

(*Mr. Proctor.*) The usual mellowing on account of age. To begin with, the two spirits were undoubtedly different in flavour, but whether they were better or whether they were worse is a matter of opinion.

17932-3. (*Dr. Adeney.*) I was wondering whether you, according to these results, confirm the late Dr. Bell in the opinion which he expressed before the House of Commons Committee, namely, that the effect of maturing was a change in the pyro compounds, and not so much an effect upon the secondary products?—It is very difficult to express any definite opinion about that. Do you wish to ask me about the so-called pyro products which there may be in whiskey?

17934. I should like to know whether you yourself agree with Dr. Bell's explanation of the mellowing effect by maturation?—I do. There is no question that the flavour of whiskey is really not connoted by the various things which are usually given analytically. The various substances we estimate analytically do not stand necessarily in any relation to the flavours. The flavour of malt whiskey is to a large extent derived from the character of the malt, and that in its turn is affected by the character of the fuel which is used in malting. I think most distillers are convinced from observation that this is so—that the specific distinctions between whiskies are very largely, not entirely but very largely—affected by local conditions as regards not only water but also as regards the fuel which is used in malting. I know they have that opinion in Islay, and they associate it with the particular character of the plants which grow in Islay, and which are found in the peat. Also in malting by peat there are undoubtedly small quantities of pyridine and other nitrogenous organic bases formed, and these things, even in very small quantities, affect the character of the malt very materially. Now we know that this is so in methylated spirit. The amount of these substances present in methylated spirit is very small, but we really depend upon their presence for the safeguard of methylation. Methyl alcohol itself would be of no use as a deterrent against drinking methylated spirit. It is the products which are associated with the methyl alcohol which are the chief deterrents in preventing people habitually drinking methylated spirit. In de-naturing alcohol the Excise has two objects in view. First of all it is to earmark the spirit as duty free. The main ingredient in wood naphtha which serves for that purpose is the methyl alcohol. Our tests have been so far perfected that we can detect very small quantities of methyl alcohol, and therefore very small quantities of methylated spirit. Methyl alcohol alone is not sufficient to prevent people drinking de-natured alcohol, but it is the pyridine and the picoline and the allied substances which are present, and which give the methylate spirit its distinctive character and its nauseous taste. These things are also produced by peat, and pass off in the fumes and smoke, and they get occluded in the malt, and taint the spirit which is obtained incidentally from that malt, or rather from the wash prepared from that malt. It is true, as Dr. Bell said, and I have no doubt his observation was largely grounded upon his knowledge of the changes which take place in methylated spirit, it oxidises, it darkens in colour on exposure to air and to light due to the change in its empyreumatical products, and methylated spirit after a time is less nauseous than when it is newly made, that is, when it contains new wood naphtha. So it is quite probable that by storing a whiskey these empyreumatical products which are there in infinitesimal quantities and are hardly detectable except by taste, alter by time, and become oxidised, and the spirit becomes thereby changed in character.

17935. (*Dr. Adeney.*) Do you consider that the experiments which the American observers, Messrs. Crampton and Tolman published in the Journal of the Chemical Society, support the view that you have mentioned?—In the main they do, but there is an essential distinction in storing American whiskey as compared with ours. They generally store their whiskey in charred casks. The cask is lined with charcoal, as it were, and the charcoal exercises a specific action.

17936. They do give samples of whiskies stored in charred and uncharred casks?—Yes. They do in the main support us.

17937. The result on their whiskey of keeping it is to produce two differently flavoured whiskies, but so far as analysis goes I think the secondary products remain practically the same?—That is so. I have no doubt that charcoal has an effect in altering the flavour It exercises a selective action on certain ingredients.

17938. (*Mr. J. Y. Buchanan.*) When they refer to alcohol being kept for so many years in cask, would it be in a new cask?—I do not know. I am not able exactly to answer that.

17939. The purpose of my question was with regard to the colour that you give here as nil and extending to pale sherry. I suppose the pale sherry was at the end. Would that be a strong enough colour for a whiskey that could be sold?—It might be sold as a Scotch whiskey. The range in colour, of course, in genuine Scotch whiskey is very wide. I have had given to me Islay whiskey six or seven years old which is very faint in colour indeed.

17940. Of course a whiskey, whether a pot still, or a patent still whiskey, comes over clear like water?—Yes.

17941. If, for instance, a pot still whiskey was kept in bottles alone would it attain any sensible colour?—No.

(Adjourned for a short time).

Dr. G. S. BUCHANAN took the Chair.

17942. (*Dr. G. S. Buchanan.*) When we adjourned you had been telling us about the changes that take place in whiskies in cask. I see that in addition to that you have made some examinations with regard to changes in spirits stored in glass bottles. The result of that, which is shown, I think, in the Appendix XI., is substantially that there is no change, or extremely little change?—That is so. When the whiskies are bottled they do not suffer any change.

17943. Now, taking the question of changes in the composition of whiskey as a whole, it appears that the alterations in the estimated secondary constituents in whiskey, even if you store it in cask for a considerable period, have a comparatively limited range, and when you put whiskey in glass bottles it does not change at all. That has a good deal of importance with regard to the question of identifying particular spirits, has it not?—Yes.

17944. That question has come before the Commission in a good many ways in connection with suggested methods of control of spirits, that is to say, the tracing of spirit from the distillery to the merchant, or from the merchant to the retailer, as a method of administrative control. The changes which take place in these whiskies being either slight in range in the case of casks, or nothing at all in the case of bottles, makes that control a good deal more feasible than might be supposed?—Yes; we can usually authenticate the identity of a spirit. I might give you an illustration of that by something which occurred a few months ago. We were asked by a magistrate in a police court to help him in a case which had been brought before him through the instrumentality of the police in which it was necessary to authenticate the spirit. A certain person, a watcher at the Exhibition at Shepherd's Bush, was found by the police intoxicated, and the allegation was that he had stolen two bottles of rum which were missing from the store of one of the refreshment contractors, and a bottle of rum was actually found in his possession when he was found intoxicated. The man alleged that this was not the rum which was missing, and he said that it was his own rum which he had purchased. In face of that statement the magistrate asked us if it was possible for us to determine whether the rum which was found in his possession was or was not identical with that which was the property of the refreshment contractor. As a matter of fact we had no difficulty in determining that it was, and that it was not, because when we analysed a sample of the rum we found its spirit strength was not the same, but when we determined the proportions of the secondary constituents, and reduced them in ratio to the amount of the absolute alcohol present it was perfectly clear what had been done: the rum was identical with that mixed by the contractor, but had been diluted with water.

17945. You felt perfectly confident on the analytical data in giving that opinion?—Yes.

17946. May I take it that it is part of the ordinary procedure in cases where for Excise purposes it is necessary to establish the identity of a spirit taken from different places to rely on the analyses that are made in your laboratory?—It is one of the methods; it is a corroborative proof.

17947. A corroborative proof which is in fact employed?—Yes, it is actually employed.

17948. There is only one other point in regard to age, and that is how far this work of yours appears to correspond with the work that is being done in America on storage in wooden casks. The difference is that the American results have been obtained from charred wood casks?—In some cases.

17949. And the temperature of storage is very different?—Yes; as a rule. We do not have the high temperatures which they have in America.

17950. Would you say as a whole that the American results as reported in the Journal of the American Chemical Society in January, 1908, point in the same direction as those given in your tables?—They do.

17951. The various analytical methods of estimating the secondary constituents of spirits, and particularly whiskey, have received a great deal of attention in the Government Laboratory. You have handed in, I think, a paper, which is XII. of your series, which tells us the methods usually employed in examination of commercial spirits, and the methods of determining secondary constituents, with an addition, giving a brief account of the French or Savalle method of estimating the higher alcohols in brandy as modified by Girard and Cuniasse, and also of Beckman's method of extraction and estimation of alcohols, and the Allen-Marquardt method of the extraction and estimation of the higher alcohols. If you will hand them in they will be reproduced as part of your evidence?—Yes. (*See Appendix 2, XII.*) The methods we use in the Government Laboratory are with one exception methods which are common to all methods of examination. The determination of the acidity, the determination of the esters, the furfural and the aldehydes are methods which are generally employed by analysts who have occasion to do this kind of work. Where we differ from the general run of analysts is in the process which we adopt for the determination of the higher alcohols. Our method is, to begin with, based upon a different standard. We do not compare them as the French do in the case of brandies where they compare them with isobutyl alcohol, and not as is done in other methods of referring them all to a standard of amyl alcohol, but we make up a mixture of the higher alcohols in something like the proportion in which they are usually met with in fusel oil.

17952. (*Dr. Adeney.*) Is that based on Dr. Bell's examination?—Yes, it is based on Dr. Bell's examination, and partly also it is based on subsequent work done by Mr. Lewin in the laboratory. Of course, in the case of the French method that is not strictly applicable to whiskies, because isobutyl alcohol is not usually the main constituent of the fusel oil of whiskey. On the other hand, referring it to amyl-alcohol alone is found in practice not to be convenient because the proportion of the associated alcohols very materially affects the colour change, and, on the whole, it was found to be more convenient to make up that standard mixture, as we call it, of the different alcohols in something like the same proportion in which they occur in ordinary fusel oil.

17953. Are the ingredients of the standard mixture frequently renewed? Do you have any difficulty as regards getting the same degree of purity?—No. All the alcohols are fairly uniform as regards purity. There is no difficulty in reproducing the standard.

17954. I notice you make another departure from the usual practice, and that is the addition of furfural?—Yes, we do that to bring the mixture under comparable conditions.

17955. The modifications perhaps explain the very close agreement between the results you get by your ordinary laboratory method and by the Allen-Marquardt?—We tend rather to agree than in the case of the French method, but still even there there are discrepancies. We do not always agree all along the line with the Allen-Marquardt results, and certainly not with the Beckman method.

17956. (*Dr. G. S. Buchanan.*) On the whole, I think you are disposed to regard the method adopted as presenting some advantages over the Allen-Marquardt method for practical work?—The advantages it presents are simply the ease and rapidity with which it can be done and the fact that it may be done with the relatively small quantities taken under the Food and Drugs Act. The results you get are for practical purposes—mainly identification in our case—quite sufficient.

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17957. This method of estimating the higher alcohols is the same method that has been employed for many years in the laboratory?—Yes, it has been employed for many years in the laboratory. It was employed before my time. I should think for 20 years.

17958. So that you have the advantage of having a large series of analyses obtained by comparable methods—by the same method?—Yes, there is a continuity in the method which is of great importance to us.

17959. (*Dr. Adeney.*) I notice that in the description of methods which you have kindly handed in you determine the volatile acidity twice. In your table of analyses you give the volatile acidity in percentage of spirit and in parts per 100 cubic centimetres of absolute alcohol?—Yes, expressed in milligrammes per hundred cubic centimetres.

17960. Are those two separate determinations? I am not quite certain whether I have made myself quite clear to you. In your statement headed "N" the method of determining the volatile acidity in the spirit indirectly, by difference, is described; the method of directly determining the volatile acidity is also given. Do you usually make determinations of the volatile acidity according to both methods?—In the distillate, in the first case, the sample is examined without any distillation. You take 50 centimetres, determine the acidity, and then take another portion of 50 cubic centimetres, evaporate it, and treat it with water, so as to get the volatile part away, and then determine the residual acidity. Then you distil it, and you determine the total acidity in the distillate.

17961. You do that the second time?—Yes, that is determined in the distillate.

17962. Are those the two determinations given in your tables? The usual thing is that there is a slight difference?—They are given, but they are separate determinations in that sense. Each determination in the tables is given as the result of those operations, determination of the volatile acidity by difference in the first place, and the determination of the total acidity which is considered volatile acidity in the distillate.

17963. It is an important point to clear up, because analysts might adopt either one or the other?—The results are independent, and they are obtained as stated. We determine the total acidity in the way as described, and by boiling down another quantity of the same material without distillation we expel the volatile acidity and determine the residual in that. Then we distil the whiskey for the distillation for the secondary constituents, and in the portion of the distillate we determine the acidity which, of course, in those cases is the volatile acidity.

17964. (*Dr. G. S. Buchanan.*) In the case of pot still distilleries, we have had some evidence on the subject of the amount of fractionation that goes on and the effect of the addition of feints and low wines. Your opinion with regard to that is that the addition of feints to the low wines in pot still distillation has comparatively little effect on the spirit, I think?—Of course it has an effect on the spirit, but perhaps I do not understand what you mean.

17965. I was reading from the top of page 5 of your *précis*, where you say this: "With respect to the effect of the addition of feints to low wines in pot still distilleries, it may be stated that the addition of feints to the low wines has comparatively little effect on the spirit." Then you give two reasons for that?—Of course, it all depends on the point of view from which it is regarded.

17966. You are speaking here rather of the chemical result?—Yes. In the first place the proportion of what I may call extraneous material which is being dealt with is very small, and therefore the effect of a distillate containing in the aggregate small portions of that material upon the manufactured spirit is not very large. That is why I say, therefore, the effect of the feints is not very considerable. I say that because the quantity of feints is very small compared to that of the low wines, and next because the feints, like low wines, consist mainly of a dilute mixture of alcohol and water.

17967. At the same time, of course, the feints contain a greater percentage of the secondary constituents than either low wines or the spirits?—Yes, but then the total quantity in the feints is very small compared with that of the spirit. The actual amount of the secondary constituents is a very small percentage. The main thing is the ethyl alcohol.

17968. In those observations you are speaking relatively to ethyl alcohol?—Yes.

17969. As regards the flavour and characteristics of whiskies, which are due to secondary products, of course it is possible that the feints may mean a very great deal?—Yes. The feints may mean a very great deal, but the actual amount of material other than ethyl alcohol is very small.

17970. (*Dr. Adeney.*) I would like to ask you some questions on this point. It is an important point, because it is possible that the difference in practice with regard to the feints in the pot and patent still processes may yet be found distinctly to differentiate the one process from the other?—It does in a measure.

17971. The only actual evidence that we have so far had was given by Dr. Schidrowitz. I do not know if you have looked over those experiments?—I have read, though it is some time since, what Dr. Schidrowitz said.

17972. Perhaps you will allow me to refer to the points. He states this: "Experimental. Pot still distillation. The following figures relate to a complete distillation of a Scotch pot still all-malt whiskey. Particulars of distillation. Wash Still Charge: 3,868 gallons producing 1,403 gallons of low wines at 66·3 under proof. Low Wines Still Charge: 1,323 gallons which yielded 110 gallons foreshots at 24·1 over proof. 172 gallons whiskey at 19·4 over proof. 390 gallons feints at 41·5 under proof." Now I have calculated those out, and find that the amount of absolute alcohol in those three fractions were as follows:—"The foreshots 77·8 gallons, whiskey 117, and the feints 130 absolute alcohol. The secondary products were determined by Dr. Schidrowitz in these different fractions, and in the feints and foreshots together they amounted to 1·158, and for the whiskey 0·456 per 100,000 gallons absolute alcohol. Then he goes on to state that it is in practice found necessary to try as far as possible to use up the whole of the contents of the feints receiver at every subsequent operation. Matters are so arranged that the feints and foreshots amount in volume to about one-third, and the low wine to two-thirds of the whole charge of the low wines or spirit still. Judging from that unless there is some interchange—no doubt there is hydrolyses of esters and that kind of thing, and some loss of higher alcohols, it seems that as the distillation season advances you would get accumulation of secondary products, and yet the whiskey always remains practically the same. Can you give us any information with regard to this?—We have got some facts as to actual distillery procedure now. I do not know that our numbers exactly corroborate those of Dr. Schidrowitz.

17973. (*Dr. G. S. Buchanan.*) Was not that a single experiment out of a single still, which Dr. Schidrowitz admitted was inconclusive by itself?—I have not had an opportunity of comparing his results with what we have obtained as examples of practical working in pot still distilleries. Shall I go on with that?

17974. If you please?—That was a pot still that you are speaking of?

17975. Yes?—I will confine myself to the pot still. I have here four examples of pot still working in four different distilleries. The first, which I will call A, was a comparatively small distillery, and malt only was used. In this distillery the wash produced and distilled over the period of working that we are concerned with was 14,029 gallons, the gravity of which was 1,050. The actual volume of low wines produced by the distillation of this wash was not given to us, but the spirits produced by the distillation of the low wines and the feints were given to us. The low wines produced 1,134 gallons of alcohol of a strength of 35·9 over proof, which when reduced to proof was 1,541 gallons or 878 gallons of absolute alcohol.

17976. Now we come to the feints?—There were two feints receivers in this case. The 995 gallons in the one feints receiver so collected was of a strength under proof of 86·7. In the other feints receiver 350 gallons

were collected of a strength of 28·3 under proof. That meant in the aggregate 358 gallons of proof alcohol or 218 gallons of absolute alcohol. You have, therefore, the means of comparing 878 gallons of what you may call commercial alcohol, more or less finished new whiskey and an amount of feints which contains 218 gallons of absolute alcohol. In other words, there was four times as much alcohol in the finished whiskey as there was in the feints.

17977. Will you hand to the Commission that return?—Yes.

17978. That and the patent still as well?—Yes. (*See Appendices 2, XIV. and XV.*)

17979. This was in an ordinary process of distillation?—Yes, the ordinary working process.

17980. Is this the Scotch process?—Yes, Scotch malt whiskies in pot stills. In another distillery, which we will call B, where malt only was used the amount of wash produced and distilled was 31,370 gallons. That was of a gravity of 1,050. No return was given to me of the low wines produced by the distillation of the wash, but the results of the distillation of the low wines produced 2,845 gallons of spirit of an alcoholic strength of 21 over proof, which reduced to proof, or bringing it up to proof, is 3,462 gallons, or converting it into absolute alcohol 1,973 gallons.

17981. Of low wines?—No, spirit.

17982. This is spirit produced from the low wines?—Yes. The corresponding amount of feints produced from that operation was 1,453 gallons of a strength of 54·7 under proof, which, when reduced to proof, was 659 gallons, or turning it into absolute alcohol it was 375 gallons. That is between five and six times more alcohol is got in the first instance than is contained in the feints.

17983. (*Dr. Adeney.*) Were the spent lees from that distillation examined?—No, these are only the returns. Now I will give you figures relating to a medium distillery which was also malt only. There were 54,601 gallons of wash distilled. This was of a somewhat lower strength—only 1044·5 specific gravity. That gave 17,200 gallons of low wines of an alcoholic strength of 66 under proof. Those low wines contained therefore 5,848 gallons of proof spirit, which calculated to absolute alcohol was 3,333 gallons. That volume of low wines produced by distillation of the wash, namely, 17,200, when distilled gave us of spirit 4,606 gallons of 21 over proof strength, which when calculated to proof gives 5,572 gallons, or 3,176 gallons of absolute alcohol. The feints produced were 1,598 gallons of a strength of 65 under proof, which contained 559 gallons of proof alcohol, or 318 gallons of absolute alcohol. In round numbers the ratio of the spirit is as 10 to 1. I will conclude with the case of a large distillery also using malt. In this particular distillery, which I will call D, there were 74,331 gallons of wash produced of a gravity of 1,051. Those gave of low wines 26,659 gallons of an alcoholic strength of 67 under proof. Reducing that to proof, it becomes 8,797 gallons, or in absolute alcohol 5,014 gallons. Those low wines on distillation gave 7,822 gallons of spirit of alcoholic strength of 11·8 over proof, which, being reduced to proof, becomes 8,745 gallons proof, or 4,985 gallons of absolute alcohol. The corresponding feints obtained in that distillation were 1,142 gallons of a strength of 51·7 under proof, equivalent to 551 gallons of proof or 314 gallons of absolute alcohol, which is, as you see above, very much less than the one-tenth; in other words, the larger the volume operated upon the more perfect is the separation of the alcohol in the feints. There is much less ethyl alcohol going into the feints with better apparatus and on a larger scale than on a small scale. Perhaps we can bring this out in another way. I will give you the actual amount in weight in order to show you how very small is the quantity of material other than alcohol in the feints. I wish to insist that the feints are practically impure ethyl alcohol, that is, they are mainly ethyl alcohol, with a concentration of the bye-products, and in the course of the operations these are continually reintroduced. The feints from the first operation are introduced into the second and the feints from the second operation are introduced into the third batch of low wines, and so on, so that they are being continually worked over again. The alcohol which is being brought over in the feints is being continually put back in each successive charge of low wines and so is worked over again.

17984. In the course of a distillation season they do not tend to accumulate?—At the end there is a little left over, but not very much. I will give you as an example the amount of secondary products. It is best illustrated by taking a patent still. In the pot still the fusel oil is being continually put back, and in the patent still the fusel oil is taken away by a special operation. I have here four cases which I can give you. I have in one of these tables three cases of distilleries, all, I think, working patent stills, but that is not whiskey. In the illustration I have given you of the English distillery they are not making whiskey, they make pure alcohol; they may turn that into gin, or it may be used as commercial alcohol, but the principle is the same in that they separate the fusel oil in all cases.

17985. And it is a grain spirit, I may take it?—I can tell you what the materials are. In A, the English distillery, the charge is made up of 10 malt, 45 of maize and 45 of rice. That patent still distillery made 83,695 gallons of proof spirit which in absolute alcohol is equivalent to 47,706 gallons. The weight of fusel oil which was separated corresponding to that absolute alcohol was 2,219 lbs., or, in other words, for every 100 gallons of absolute alcohol produced there is only 4·65 lbs. of fusel oil. If it were all put back it would be equivalent to 465 milligrammes per 100 cubic centimetres, which is very much what an ordinary pot still whiskey would contain. I will give you another case of a Scotch distillery, a patent still distillery, making in this case whiskey. The charge was—malt, 25 parts; maize, 72 parts; oats, 3 parts. That particular distillery made 2,914,000 gallons of proof spirit. That is in a year's work. The equivalent in absolute alcohol was 1,660,980 gallons. The corresponding amount of fusel oil in lbs. was 51,943. For 100 gallons of absolute alcohol that is 3·13 lbs. of fusel oil, which, if it had got into the spirit as it would do in a pot still, would be equal to 313 milligrammes per 100 cubic centimetres of alcohol. These numbers which are obtained from comparatively recent operations bear out Dr. Bell's figures as to the proportions of spirit to fusel oil.

17986. It is quite evident that there is a very considerable difference, chemically speaking, between the two processes of pot and patent?—Yes.

17987. We know from Dr. Bell's analyses, and I take it they still stand, that the patent still spirits do not contain at any rate appreciable quantities of higher alcohols above propyl-alcohol?—You will find traces of amyl-alcohol, certainly.

17988. Traces?—I mean a notable amount of amyl-alcohol.

17989. Has any subsequent work been published which does not confirm Dr. Bell's results?—Not published, but I think we have evidence. I know there are occurrences where the residues which have been accumulated by the distillation, by the fractionation, in fact, of patent still spirit were found to contain amyl-alcohol.

17990. But, of course, in nothing like the same proportion as the pot still?—I do not remember the amounts, but it would not be quite correct to say that the sole constituents—the fusel oils——

17991. Not the fusel oils. I mean the secondary products in the finished product?—It would not be correct to say that the secondary products still remaining in the patent still would consist wholly of propyl-alcohol.

17992. Would you go so far as to say that it largely consists of propyl-alcohol? In other words, may we take Dr. Bell's figures as approximately accurate?—I do not remember. I should say, speaking generally, that they would be true. It is bound to be true, when you come to think about it, that a patent still whisky would tend to contain relatively smaller quantities of amyl-alcohol than the pot still whiskey. Of course, in the case of pot still it is bound to contain large quantities, because it is continually being put back. In the case of the patent still the process of fractionation goes on, and the fusel oil, by the very principle by which the patent still is worked, would tend to contain considerable quantities of amyl-alcohol on account of the difference between the boiling point of amyl-alcohol and that of the others.

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17993. We have had it in evidence that the higher alcohols in pot still spirits differ in composition from those in the patent still spirit. Dr. Bell in his evidence stated that, and pointed out that the fact that there was so much amylic-alcohol separated in the fusel oil in the patent still process afforded an explanation?—I should not say that it was so much an explanation as an inference. Inasmuch as those products are put back in the distillate in the manufacture of a pot still whiskey it would be a matter of inference that there must be larger proportions of amyl-alcohol in the pot still than in the patent still whiskey.

17994. Is not that an explanation of the marked difference there is in flavour in a pot still as compared with the more or less neutral flavour in the patent still?—To some extent no doubt. Amyl-alcohol has a special flavour that we all know of. There is a curious kind of choking action which it has which may and no doubt does affect the character and the flavour of the spirit.

17995. The amyl acetate would give flavour?—Yes, it would if there is a considerable quantity of amyl-acetate, and I think it is self-evident without any experimental fact that pot still whiskey must contain larger quantities of the highest of the higher alcohols than patent still, because the process of rectification which goes on in a patent still will tend to separate those things out.

17996. If any further information may occur to you with reference to those questions which might modify the conclusions deducible from Dr. Bell's experiments, perhaps you will kindly give the Commission the benefit of it?—Yes. I think Dr. Bell's contention obviously is correct on first principles. I am not aware that Dr. Bell ever got experimental verification of an inference which is highly probable. You seem to think that you have found in Dr. Bell's evidence direct experimental verification of it.

17997. Yes, I think so?—I was not aware of that.

17998. In his evidence at Question 3527 he makes a statement to the effect that in patent still spirits the higher alcohols are almost entirely propylic?—He does say that.

17999. I think it is based on figures which have gone before?—But that is only relative. I do not think Dr. Bell ever went so far as to say that amyl-alcohol was absent from patent still spirit.

18000. No, not completely absent?—But it was there in sensible proportions.

18001. (*Dr. G. S. Buchanan.*) I would like to be clear in regard to those experiments. The feints in your sense include foreshots?—Yes.

18002. Then was the determination that was made in those four cases of pot still distillation of the amount of alcohol in the low wines, in the feints, and in the whiskey carried out so that it made an equation—so that you could account for all the ethyl-alcohol to begin with, and all the alcohol at the end. Did you attempt that at all?—No. These were simply distillery returns which were furnished us from the working books of the distillery. Probably they are not complete in that sense.

18003. In fact, no equation could probably be made, because you would have to allow for the amount of alcohol in the feints of the previous distillation which would be added?—Certainly, but there are differences, because you see in this particular case, confining our attention to the patent still, the origin of the spirit is dissimilar. The character of the grain which is used is not the same, and the material from which they started varies in one case from the other. It is perfectly certain that the character of the material that you start with does affect the proportion of fusel oil, and also the nature of the fusel oil.

18004. I was thinking not of contrasting one experiment with another, but as to any one experiment, how far you had gone in that matter. You estimated the amount of ethyl alcohol in the low wines and in the feints and in the whiskey, and you estimated the amount of fusel oil in the same and determined the weight of it in each case?—Yes.

18005. That I suppose is about as far as those experiments go. They do not enable us in any way to analyse the constituents of the fusel oil so as to know which preponderated in the feints and in the low wines?—No. There is no attempt at analysis of the nature of the fusel oil, and no attempt to determine the relative proportion of the constituent alcohols.

18005*a*. I put that question to Dr. Schidrowitz when he gave us an experiment on a particular still which he had conducted, which was a very small still. He gave us the total impurities, but he did not attempt to divide them in any way. I wondered whether anything of the sort had been attempted?—No. It would be very interesting scientifically, but it is a very difficult problem, even supposing we were possessed of very much more accurate means than we have of determining the relative proportion of the constituent alcohols. We are better off no doubt than we were a few years ago. The introduction of such an instrument as the Zeiss refractometer has greatly increased our chances of determining these relative proportions, and if somebody would systematically apply the Zeiss refractometer they would elicit a very great deal of valuable information as to the nature of the secondary products, and of their relative proportions. It is perfectly well known that the proportion of the secondary products is largely affected by working conditions, for example the gravity of the wort, the temperature at which the fermentation takes place, and the nature of the yeast which is employed. It has been shown that you can very largely affect the proportion of amyl-alcohol which you produce by using a specific yeast. All these things would have to be taken into consideration if you are going to determine the conditions first as to the production of fusel oil, and then as to the nature of the fusel oil which you have formed. It would be a very long, laborious and complicated problem which would not be worth doing until you were furnished with sufficient equipment to enable you to analyse with an approach to certainty the products. It will not be done until we are more advanced in the determinative means than we are at present, but we are rapidly improving in that respect, and it will not be many years before we are furnished with accurate methods for the analysis of such a mixture as fusel oil.

18005*b*. There is one observation further with regard to the estimation of the homologous alcohols of the acetic series other than ethyl alcohols, the higher alcohols, which are present in small quantities in all commercial spirits. You point out that none of the methods so far suggested can be regarded as very satisfactory. You have already expressed some opinion about the various methods that are followed, but you point out here that they all aim at estimating and expressing in terms of some one substance some half-dozen or more alcohols which are present in relatively minute and varying proportions in the spirit, together with other substances known and unknown, which occasionally materially interfere with the tests. That seems to crystallise in a few words a point that is constantly coming up?—Yes, that is so.

18006. Then I think pages 8, 9 and 10 of your *précis* are practically covered by the Appendix XII. that you have put in?—Yes.

18007. There is a modification of one of the methods of estimating higher alcohols which you have brought to our notice which is I think new and desirable to have on our notes?—You are referring to the method of shaking with the oxidising mixture?

18008. Yes?—We find that it is satisfactory, and that it obviates what is certainly a difficulty in the other methods. The contact with the oxidising mixture can be much more satisfactorily made by mechanical shaking than by heating under a reflux condenser. By using a shaking machine an oxidation can be completed in the cold in an hour or an hour and a half, instead of the eight hours required in refluxing. Not only is the oxidation complete, but with a properly adjusted oxidising mixture only the acids corresponding to the alcohols are produced with little or no acetic acid, except what is derived from any ethyl alcohol present. One can then assume that if the mean combining weight of the acids is not over 80 some proportion of the alcohols in the carbon tetrachloride solution consisted of ethyl alcohol. As the oxidation and determination as acids of the alcohols in the carbon tetrachloride extract is easy and satisfactory, the Allen-Marquardt test modified as suggested is certainly superior to the

Beckman method, which, of course, is open to the same objections so far as the extraction is concerned, and which also includes any ethyl alcohol extracted as "higher alcohols" without the possibility of any check on the amount of such ethyl alcohol. Of course the chief objection to the old process of oxidising in the heat is that the corresponding acid, that is to say the acid corresponding to the particular alcohol, is further broken up under the influence of the oxidising mixture with the formation of acetic acid. That is very largely obviated by doing the oxidation in the cold by means of a shaking machine at the ordinary temperature of the air, whereby none of the higher acid is broken down under the influence of the oxidant.

18009. (*Dr. Adeney.*) You have given in your *précis* the time necessary as one hour to one hour and a half?—Yes, I think about an hour to an hour and a half is the time necessary.

18010. That you find from experience a sufficient time?—Yes; we have studied the influence of the oxidising mixture upon the several constituent alcohols. It is not only quicker but it is more certain. The usual time required in refluxing is eight hours.

18011. (*Dr. G. S. Buchanan.*) It shortens the process very much?—Yes, and renders it, in our opinion, more accurate.

18012. This is a modification of the Allen-Marquardt method?—No; we do not use that. It is our own method. We do not reflux.

18013. Then in your *précis* you have made some observations on the difficulty in imposing any method of control of the nature and proportion of patent and pot still spirits in mixtures, based on chemical data or chemical standards. There is a difficulty in imposing any method of control of that sort based on chemical data?—We think it is an almost insuperable difficulty.

18014. But you regard it as due, not so much to the fact that the analytical methods are defective as that in both classes of spirits the amount of secondary products, and of each of the individual constituents, varies within such wide limits?—That is so.

18015. You have not much difficulty, as a rule, in determining whether you are dealing with a purely patent still spirit or with such a spirit containing only a small percentage of pot still spirit?—No. The differences are so wide that there is no difficulty. When you get to typical cases there is no difficulty in forming an opinion.

18016. Even in the case of an entirely unknown sample?—Yes, I should say so.

18017. The same thing would apply at the other end to the pure pot still spirit?—Yes.

18018. Then you say that in mixtures containing a substantial proportion of each kind of spirit it is not possible to go further than to state that a sample is probably a mixture of the two spirits within somewhat wide limits?—That is so.

18019. So far as whiskey is concerned, any fixed chemical standard, based on any of the individual or of the total secondary constituents, would be of little use, as it would be so easy to work up to the standard?—It would be perfectly useless, because if you fix any standard it only requires that a certain proportion of these secondary products should be put into it to bring it up to your standard.

18020. Then you point out that the distillers (both patent still and pot still) can easily control the amount of the secondary products that may be allowed to come into their spirits. The patent still distillers usually aim at producing a fairly pure and neutral spirit so that it may be flavoured with a suitable pot still or other flavouring material. But there would be no difficulty in the user of a patent still allowing a larger proportion of the secondary products to find their way into the spirit. You point out that not only could the patent still distillers work up to a particular arbitrary standard of that sort, but there would be further difficulties?—Yes.

18021. Thus there are forms of stills intermediate between the usual types, pot stills containing more or less effective rectifying arrangements, or heated by steam, and patent still analyser columns worked in combination with pot stills?—Yes, I have given you already an illustration of that.

18022. Another difficulty would be that any arbitrary chemical limit must be fixed comparatively low?—Certainly our experience in fixing limits shows that they would have to be fixed low.

18023. Arbitrary limits of that kind?—Yes.

18024. Next, you refer to substances present in pot still spirits which are not now usually determined by chemical analysis, some of which substances may have as much to do with the taste and flavour of different kinds of spirits as those now determined. You already mentioned, as an example, substances of the pyridine order?—Yes, pyridine, and picoline, and we have also others, allyl alcohol and allyl aldehyde.

18025. In your examinations you have actually found indications of the presence of allyl alcohol and allyl aldehyde, and in Highland whiskies of pyridine and similar nitrogenous basic substances probably derived from the peat used in drying the malt?—Yes.

18026. You attribute that to the nature of the peat?—Yes, to the nature of the vegetation and of the peat. I have also found acrolein in whiskies. It may be due to the presence of fat in the wash extracted from the grain. Grain always contains a certain quantity of fatty matter, or it may have been due to the introduction of fatty matter into the still. When a still begins to prime they occasionally introduce soap, and this may lead to the formation of acrolein.

18027. Would not that have a deleterious effect on the flavour of the whiskey?—That is a matter of opinion. I daresay one accustomed to drink a whiskey containing a 100,000th part of acrolein may like the flavour, but personally I should not.

18028. (*Dr. Adeney.*) What is the substance that produces ethery whiskey or spirit?—That is a thing which has interested me very frequently. There is no doubt there is what is called ethery whiskey, and I should say rather it was due to the production of aldehydes—ethyl aldehyde, most likely.

18028*a*. (*Dr. G. S. Buchanan.*) You have told us your experience with regard to the change which takes place in age in whiskies. Is there anything you wish to add on the subject of age?—Nothing, except that I think the influence of age tends to be exaggerated. We cannot find any real experimental evidence that after about 18 months or two years there is any very sensible alteration in the character of whiskey which is commensurate with the allegation which is generally made concerning it. At the same time with regard to highly-flavoured whiskey, which owes its flavour to empyreumatic substances, probably a change does come over the whiskey which makes it more palatable and more mellow and of better flavour. But taking whiskey on the whole, and the average condition of things, I fail to find that there is any very obvious gain to the consumer commensurate with the relatively higher price that he has to pay in interest for the locking up of so much capital before he drinks the product. I venture to say that it is a false analogy which has led to this sentiment. In the case of wine there is no doubt an improvement comes over wine in bottles, and even in the vat certain things—secondary fermentations—take place and certain matters are gradually precipitated in the wine; as the amount of alcohol forms they slowly crystallise out, and then, of course, certain compound ethers are made in the process of ageing wine. I think the analogy has been carried to other forms of bottled alcohol, and I venture to say it is a false analogy, at any rate as regards whiskey. There may be something in it as regards brandy. There is no doubt butyric ether is formed and slowly formed in brandy, but I fail to find any evidence that there is any real improvement except in isolated cases in whiskey by keeping it for the length of time that it is kept.

18029. In cask?—In cask or in bottle. In bottle it is certain it does not undergo much change, and it does not undergo much change in cask after two years, at the outside.

18030. You are speaking primarily of the ordinary tests which are applied to these whiskies?—Yes.

18031. Do you know if there is anything which corresponds chemically to the pungency and rawness of new whiskey, which would be typified by new grain whiskey?—Yes; I think it is due not so much to the things that we estimate—the furfural, or the aldehydes and compound ethers and alcohol—but I think it is

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due in many cases to these fortuitous and accidental things that we do not estimate—to the character of the fuel or the changes which are going on in the distillation.

18032. Might such product be present in the new grain spirit or new patent still spirit as well as in the new pot still spirit?—Not to the same extent. The operation of making patent still spirit, to begin with, tends to cleanse the spirit, and the operation tends to a purification of the alcohol.

18033. At the same time it is admitted generally in the trade and by the ordinary consumer or ordinary person who has samples side by side, that a new grain whiskey is far from pleasant?—It is not nice. It is not very palatable.

18034. Whatever that may be due to, it is nothing that can be estimated chemically?—Nothing that is estimated—I do not say nothing that can be estimated, but I do not think our knowledge chemically of whiskies is by any means as complete as it ought to be.

18035. (*Dr. Adeney.*) I might now call your attention to the statement of Dr. Bell's that I was referring to. It is at Question 3550 of his evidence. He said: "In the patent still spirits the equivalent of the acids produced by the oxidation of the alcohols corresponds mainly to propylic alcohol, or a mixture of propylic and butylic alcohols. and there is reason to believe that the next higher alcohol, amylic, is almost absent. This result is in agreement with the analysis of the fusel oil obtained from the patent still, which shows a marked deficiency in propylic alcohol as compared with the proportion of the next two higher alcohols"?—I do not quite know how that was obtained. This method of oxidation at low temperatures that we have used was not in vogue in those early days. I believe Dr. Bell is right in the main, but I do not know that I attach quite the same value to the experimental evidence now that I should have then, and for a reason that you will at once appreciate that the method is not quite the same by which it is arrived at.

18036. If you can give us any further information, perhaps you will?—Yes.

18037. (*Dr. G. S. Buchanan.*) I would like to put to you a question with regard to the definitions of whiskey, brandy and rum. May we have your opinion as to what definitions may be given?—The only definitions that I can submit are the obvious, and I suppose generally accepted, definitions as to what meaning should be attached to these things. I should say that whiskey may be defined as spirit distilled from a fermented liquor obtained from cereal grains.

18038. (*Dr. Adeney.*) Would you advocate any method of saccharification?—No, I would not go any further than that. The essential point about whiskey is that it is a grain-derived spirit. That is the essential point, and as distinguished from other forms of potable alcohol. Brandy I define as spirit distilled from fermented grape juice or "must" of grapes. The essential point about brandy is that it is a grape juice alcohol, in contradistinction to whiskey, which I maintain is a cereal-produced alcohol.

18039. What would you say about a marc brandy?—That is grape—it is the marc that has been produced from grapes.

18040. (*Dr. G. S. Buchanan.*) What is your definition of rum?—Rum, I say, is a spirit distilled from fermented liquor prepared from cane sugar, molasses and sugar cane residues. The essential point about rum is that it is derived from sugar-cane.

18041. (*Dr. Adeney.*) Going back to whiskey, would you allow the amylo process for fermentation?—Yes, if the grain was the parent of the alcohol, certainly. I would not put any restriction on the character of the fermentation or the character of the distillation. The operator may treat his wash as he pleases, but it must be derived from grain.

18042. You would limit the mash to grain?—Yes.

18043. (*Dr. G. S. Buchanan.*) Taking those three classes of spirit, you have three very wide generic definitions according to origin, and then within each one of them, whiskey, brandy and rum, a very large variety of spirits of very different quality, value and method of preparation. You have some doubt as to the utility of official definitions which impose further limitations?—Yes, I think you may take those terms that I have given you in what I venture to say is their commonly accepted sense. Then any subsequent qualification is a matter which must or should depend upon the seller, the character of which he has to substantiate, and which he has to be responsible for.

18044. You think it would be desirable that he should be made responsible for these further descriptions?—I am sure that is the direction in which reform is best pursued. If he makes a statement it should be in such a form that he can be called upon to substantiate it.

18045. Reform in that direction would involve action by public authorities. It could not be left to the trade entirely?—It might. It depends how the trade choose to work it. There are analogies where trade has protected itself in that way, and where practically it has controlled itself.

18046. For example, you are thinking, I suppose, of the case of butter?—That is one case. There is the Dutch butter control.

18047. In that case the butter trade had, at any rate to begin with, definitions to work upon. It had the definition of the Legislature between, say, butter and margarine?—No. Such legal definitions that it had, and such assistance that it could get from the action of legislators to protect it was very small, as a matter of fact. One of the difficulties in dealing with the thing is the impossibility of getting a real definition even in the case of butter.

18048. At any rate, there was a clear understanding of what butter ought to be, was there not?—No, there was not. If you sat on a committee, as I have done, to investigate the nature of butter, you would know that one of the most difficult things to define is what is the ideal butter, or butter which you could consider capable of a statutory definition.

18049. To go back to the question of labels. There are a number of geographical names which are used in connection with particular products—Irish and Scotch in the case of whiskey, Jamaica in the case of rum, and Cognac in the case of brandy, and so forth. Do you think it is desirable that the use of those names should be protected as far as possible?—I think so. I think when an article by association with a town or district has got a certain commercial value that that is a trade asset which in the interests of fair trade ought to be protected.

18050. Classification based on flavour and aroma is in your opinion too indefinite to be satisfactory?—Absolutely. You could not work it on that.

18051. For example, "brandy" and "British brandy"?—No, you could not possibly have that. To take the case of aroma, it is possible so to simulate the aroma of true brandy that that would break down at once.

18052. Speaking broadly on the question of labels, you have had such a wide experience in connection with other foods and this question generally that I would like to ask you whether you consider the kind of statements made on labels of articles of food at the present time is satisfactory or whether in your opinion it needs better control?—It is not satisfactory. Things are not frequently what I may call over-described in labels, but now and again they are. Statements are put on labels which are very wide of the exact truth, and, of course, purchasers are misled.

18053. (*Dr. Adeney.*) And the labels are deliberately misleading?—No doubt.

18054. (*Dr. G. S. Buchanan.*) You have frequently given illustrations of that in your own reports?—Yes.

18055. There was "Concentrated Cream" last year, I think?—Yes, which was not cream at all.

18056. One knows of many others. Next as to the legitimacy of blending new pot still whiskies with new patent still whiskies for the production of cheap whiskies, do you think there is any necessity for any interference in that matter if the mixtures are taken not to be injurious to health?—No, I should not advocate any restriction at all of that kind. It cannot be shown that they are injurious to health and I do not see that anybody is benefited by imposing restrictions. Such restrictions would tend to enhance the price of

the article. The consumer would not be benefited by the restrictions and he would certainly have to pay more in consequence of them.

18057. Although the cost would be comparatively small, yet you think the price to the consumer would certainly go up?—Something depends upon the nature of the restriction. If you insist that all whiskey should be bonded for a certain time that would enhance its price at once.

18058. We have had evidence with regard to whiskey that if stored for one or two years compulsorily, it would not make comparatively a very large addition to the price of the whiskey to the middleman or to the publican?—Of course, it is calculable. A man knows what amount of money he has locked up, and he is paying interest on that capital lying idle, and he is losing alcohol.

18059. In any case you do not think it would be warranted by the improvement in the quality that would be likely to result?—Not beyond a certain time. I think that in about 18 months, or at the most two years, anything that is likely to happen in the way of amelioration has happened.

18060. Then I think you would say that in any case you are doubtful whether the laying down of fixed chemical limits as to the composition of articles of food and drink is ultimately for the benefit of the consumer?—I have grave doubts about that, taking it as a general principle. In special circumstances no doubt it might be of advantage, but if you ask my opinion as a general principle, I say it is fraught with considerable danger.

18061. (*Dr. Adeney.*) To the public?—Yes, to the public. I can illustrate that at great length if you wish.

18062. (*Dr. G. S. Buchanan.*) We have had consideration of that point by a good many witnesses?—Very well.

18063. You put it yourself in your *précis* in this way: the minimum limits adopted are very apt to become the ordinary basis of trade, and anything that can just pass the limits laid down has practically to be regarded as genuine, and open to sale without question, even where it is morally certain that it has been manipulated?—Yes. I should like to emphasise that if I may. There is the very obvious case of butter, and to a less extent that of milk. There is no doubt whatever that the effect of the limitation as to the amount of water which may be in butter has worked out to the detriment of the consumer. I was on a committee which was engaged in the consideration of this question, and the committee came to the conclusion, after hearing a vast amount of evidence, that the amount of water which might be present in a properly made butter need not exceed more than 8 per cent. I may remind you how this committee was formed. Some years ago there was an article suddenly launched on the market known as "Milk-blended Butter." This milk-blended butter was very largely the result of another operation. It had been discovered that butter which had gone off in character could be renovated: that is to say, the rancidity could be eradicated—that this rancid butter, which was practically unsaleable, could be so treated that an edible fat could be obtained from it by simply melting the butter and blowing a thin current of water through it, so that the butyric acid, and he products of decomposition of the casein, could be washed out. A perfectly featureless fat was thus obtained which had lost all the attributes of butter, but which could be made to resemble butter by churning it up with a small quantity of milk. In order to give it the flavour of butter it was necessary that that milk should be churned up with it, so that the amount of water left in the butter might be from 25 to 30 per cent. It was perfectly easy to make butter hold that amount of water. Of course, it also contained a small quantity of casein derived from the milk, and it quickly went bad. The only way it was kept right was by dosing it with boracic acid. The grocers naturally complained of the unfair competition of this substance, and the authorities were encouraged to take action against it. Actions were brought, several cases were fought in the courts: many of these samples were brought to the Government laboratory and analysed by us, and in some cases we gave evidence, but the law was found to be impotent to stop it. If there was something in the nature of a declaration to the purchaser as to the nature of the article that was supposed to be sufficient. Notices were put up in the shops which were supposed to convey that information, but they were so dexterously worded that the ordinary purchaser was unable to make anything out of them, and they gave no information. To an educated person they might have given information, but to the man or the poor woman in the street they gave no information whatever. Then there became such an outcry that the Board of Agriculture appointed a committee under Sir Horace Plunkett. We took a great amount of evidence; and we found that good, sound, well-made butter could be made with no more than about 8 per cent. of water. I think that every member of the committee was prepared to consider a report fixing this amount of 8 per cent. as being the fair and proper amount. We found, as a matter of fact, that large quantities of commercial butter sent to us from the Argentine, New Zealand, Australia, and other parts contained not more than 6 or 8 per cent. The Danes were in the habit of sending us regularly butter containing not more than 11 per cent. Of course, then began the difficulty: when we fixed on 8 per cent. all sorts of things had to be brought into consideration before we could recommend that as a limit. We were asked if we could bring a man into court for a trifling infraction of 8 per cent. Supposing it was 9 per cent., would we damage the reputation of a trader for this trivial fault? Then came the question what working allowance we would give. Analysts said that butter was not absolutely homogeneous, that samples when divided would not necessarily contain the same amount of water in them, and that an allowance must be made for all that. Then there was another factor in the consideration which rather weighed with us, and that was an attempt to regulate the trade in Irish firkin butter. Irish firkin butter, which is made by comparatively poor farmers, often with very small herds, one or two cows at the most, butter which mainly went into the Limerick market, was heavily charged with water. Sir Horace Plunkett was very anxious that this should be regulated in the interests of Irish trade. Though all of us were convinced that 8 per cent was fair as a limit, we ended up by putting it at 16 per cent. The effect has been unfortunate. The New Zealand and Australian Colonies had prided themselves on sending us butter very dry; they do not wish to carry water all the way from New Zealand or Australia to England. The Danes had seldom exceeded 11 per cent. Those great butter-producing countries when the law stepped in and made 16 per cent. the legal limit, said there was no obligation on them to furnish dry butter; the law would condone an amount of water up to the extent of 16 per cent. I am quite sure that the amount of water in butter now is larger than it was when we took up the question, and the consumer would have been better off if we had never handled the question of water in butter at all.

18064. The man in the street would have been better off if you had never established a fixed limit?—Yes. The same thing is true, but not to the same extent, with regard to milk. There was considerable gain no doubt from the official point of view in fixing standards for milk. It was very much easier to work the Food and Drugs Act, and it brought about uniformity in procedure. It was easier of course to get matters worked on a uniform scale, and not to have magistrates in one county doing one thing and magistrates in another county doing something else. The net result is that in order to check a few rogues—and they are only a few, because the amount of nefarious work that is done in milk is not very large—we tended to lower the standard of the general milk supply of the country.

18065. While there are strong objections of that kind to laying down fixed chemical limits for the composition of articles, there are, of course, other ways in which chemistry and analysis may be used in checking the purity and the description of articles of food. For example, as you have mentioned butter, there is the other side of the case with regard to checking the additions of lardine and these various fats that have been added in smaller or larger proportions to butter. In order to deal with this question the last butter legislation has set up a system of control of the places where butter is worked and blended in this country, and side by side with that there is going on a system

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of checking the composition of butter as it comes in from abroad at your laboratory?—Yes.

18066. In that direction although you are not operating on fixed limits you are using your analysis as a means of control of the character of the butter as against samples the composition of which you are already familiar with?—Yes, but that is very simple. The law practically says, in effect, there are only two classes of these fats, margarine and butter. When you ask what is margarine, the only answer is that it is a substance which is not butter; and if you ask what is butter the answer is that it is not margarine. We know what commercial margarine is, and we know what commercial butter is; similarly we know what pot still whiskey is, and what patent still whiskey is. But when we come to a class which is intermediate between the two, when we have blends in fact, then the difficulties begin, and when we have to deal with skilfully blended material it is not always easy to say, from the analytical data shown, whether a sample is, by the definition of the law, butter or margarine. The law says implicitly that butter should be the untreated product of the cow, and that anything in the nature of fat which is foreign to milk makes it not butter. It is *ipso facto* margarine, however small the amount of the added foreign fat. But butter being a product with considerable variations in composition depending upon all sorts of circumstances, the season of the year, the period of lactation, and the breed of the cow, it is not always easy, if the amount of foreign fat is small or its character is of a particular nature, to say whether a given sample is legally butter or not butter.

18066*a*. The difficulties that arose in that connection have to a certain extent been met by supplementing the analyses and the procedure by analysis under the Food and Drugs Act by a system of control of the factories, have they not?—Yes.

18067. That is to say, as the result of this butter manipulation and blending that went on, powers were given to the Board of Agriculture, and in certain circumstances to the officers of local authorities, to go into these factories to take samples and to see that certain regulations were observed as to the absence of foreign fats from butter. I do not know whether you are in a position to say whether that has been an improvement on the previous condition of affairs?—I would rather not say very much about that at present. It is a little early, because the whole system is on its trial. The Board of Agriculture, of course, have been slow to strike even in cases where things have been proved to be wrong. At present their powers are not very strong, and it will require some little time before any action results.

18068. You would regard the principle of the thing as desirable? You would say that where you are in difficulties as they were in difficulties in the case of these butter mixtures when proceeding only under the Food and Drugs Act, you should go back to the places where the article is made, and exercise the control there?—It is the only system that is possible; but at the same time I cannot say that it is an absolutely effective system. You may have seen recent cases in the newspapers where there was an allegation that something had been going on in a butter factory, which the inspector of the Board of Agriculture was not able to detect. There was a great deal of evidence apart from that that things were suspicious.

18069. Of course as we say the system is new, and it has hardly been in working operation for more than 12 months?—Yes; it is too soon to judge.

18070. But you think the principle of going back to the factories and to the intermediate people in a case of that sort is a right one?—It is the only one that is possible.

18071. That has rather an important bearing upon our inquiry in relation to spirits, which give rise to a great deal of difficulty under the Food and Drugs Act?—Yes.

Adjourned to to-morrow at 12 o'clock.

THIRTY-SIXTH DAY,

Tuesday, 6th April, 1909.

At the Westminster Palace Hotel.

PRESENT:

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.Sc., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq. (*Secretary*).

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Dr. T. E. THORPE, C.B., F.R.S., recalled.

18072. (*Dr. G. S. Buchanan.*) You told us yesterday, when you were considering some of the wider questions as regards descriptions of the character of different spirits, that you thought an understanding would be desirable as to the meaning to be attached to certain broad generic terms applied to spirits such as brandy, whiskey and rum?—In what sense an understanding?

18073. I think you told us that brandy should be the product of the distillation of wine, and whiskey should be the product of the distillation of grain, and so forth?—What I thought I said was that so far as definitions went the common accepted definitions of these substances were sufficient. I understood as regards whiskey, for example, that it was allowed to be primarily a grain spirit—a spirit derived by the distillation of a fermented wash from grain. I did not specify the grain, but it was essentially a grain spirit. So of brandy; brandy was essentially a spirit derived by the distillation of the fermentation of grape juice, and so of rum—that it was essentially a spirit derived from the fermentation of products derived from the sugar cane.

18074. (*Dr. Adeney.*) I was not quite clear with reference to whiskey being derived from grain

whether you limited the process of saccharification to a natural process such as malt, or would you allow a chemical process?—No, I did not interfere with the discretion of the manufacturer as to how he may arrive at the fermentable sugar, but the primary thing was that it should be derived from grain.

18075. (*Dr. G. S. Buchanan.*) You would think it desirable in the general interests that the meaning of brandy, whiskey, rum, and so forth, in those broad terms should be universally recognised?—I think it would be very convenient.

18076. And you also told us, I think, that you thought it desirable to protect as far as possible and practicable geographical and other designations such as Cognac brandy and Irish whiskey which connote a special quality of article?—Yes. My view was that when a trade had been developed by the association of a particular product with a district or in any other way that that was a trade asset, which I think ought to be protected in the interest of the person or persons who had developed the trade on those lines.

18077. And also in the interest of the consumer who desires that particular product?—Yes, certainly.

18078. Then you rather deprecated fixing hard and fast chemical limits for the purpose and you gave us an instance of water in butter as an example of the drawbacks?—Yes, as regards spirits, I said that any chemical limits, in my judgment, could be very easily manipulated. In the case of whiskey it would be perfectly easy if you defined it on such chemical limits as we at present have for the manufacturer to accommodate himself to those limits.

18079. On the other hand I rather understood you to urge that a reform is needed not only in the case of spirits but in the case of many other articles of food to prevent misleading or fraudulent descriptions such as occasionally happens in the case of the sale of spirits in bottles?—Yes, I think a wider distinction should be given to a principle which is already being adopted in recent legislative enactments, that the statements made by vendors should be made with more regard to the possibility that they might be called upon to substantiate them and verify them. I think I quoted—perhaps I did not quote but I may now quote as an illustration of what I mean—the recent Act which has been passed with regard to fertilisers and feeding stuffs, where any statement that is made by advertisement or circular by a vendor to a purchaser either of a fertiliser or feeding stuff is looked upon in the light of a warranty, and the Act also further insists that statements shall be made on the invoice as to the essential characteristics of the article which is sold, and that statements on the invoice which are required to be made by law should also act as a warranty. I think that if that principle were more generally extended very considerable good would be done.

18080. (*Dr. Adency.*) Would it follow from your definition of whiskey that if the secondary products of whiskey were increased by artificial addition of esters, or other bodies, it would cease to be whiskey?—It depends on what you mean by "artificial." Do you mean factitious substances?

18081. Yes, in order to bring it up to your working chemical standard?—If those things were not of the nature of the products of the fermentation of grain I should certainly regard that as a breach of the spirit of the understanding, but if those things that you indicate were of the true nature of the products formed from the fermentation of grain I do not see how you could prevent a manufacturer adding those things to bring them up to your required chemical standard.

18082. But for the purposes of fraud I gather from you that there was a distinct difference in chemical composition, at any rate, in the total secondary products in the patent still and in the pot still—the patent still very much less than in the pot still?—It was a question of degree, not of quality.

18083. As a matter of fact, it is very rare that there is any overlapping; that is to say, the patent still rises sufficient to overlap the lowest of the pot still?—It is rare, but it occurs. I gave you an instance of a whiskey that was produced directly by no admixture, which was, so to say, a kind of intermediate product.

18084. What was in my mind was this: supposing the purchaser of a patent still spirit, in order to reach the general idea of the standard amount of secondary products in a pot still, added certain compounds that might be of a similar nature to those naturally produced in the grain spirit, but if he added them for the purpose of making it appear that the patent still spirit was a pot still spirit, would not that be fraudulent?—No, I do not think so. That would be a mere operation of blending. He could do that, and does it now. It is true he adds them in a diluted form when he blends the whiskey—not in a concentrated form, but in a diluted form. That is when he is blending at the present time.

18085. Would not that allow that man to enter into unfair competition with the owner of a pot still distillery who had built up a reputation for his spirit?—I do not think it would be an unfair competition. It would be a very natural thing to do.

18086. Would he not do it very much more cheaply?—He might or might not. I cannot say whether he actually would. Probably he would. Of course, I draw the line upon the addition of substances which simulate what I may call the natural products of whiskey. I would not allow those to be added.

18087. I have not made myself quite clear—I mean simulation, of course?—Quite so.

18088. (*Dr. G. S. Buchanan.*) To return for a moment to the description of the labels on the spirit. In the case of spirits, we have had evidence that the middleman and the merchant usually knows quite well the character of the spirits that he is selling to the retailer, that is to say, he knows whether what he is selling him as brandy is a grape brandy, or whether it contains grain spirit, or whether the Irish whiskey which he sends to him is mainly coloured patent still spirit or not. Of course, there are exceptions, but the trend of our evidence rather is to show that the merchant knows pretty accurately, or can easily get to know, what is the nature of the spirit he is selling to the retailer. What you would rather urge is that the merchant in that case should ascertain, and he should pass on, an accurate statement to the retailer of what his spirit consists of?—Certainly. I think it is the duty of the middleman to be accurately informed of the nature of the article in which he deals, and that he should be in a position to furnish the retailer, or the person with whom he directly deals, and give him proper information as to the nature of the substance which he sells.

18089. That is to say, he should properly invoice the spirit as grain whiskey or British brandy, or whatever it is, to the man who is going to sell the article by retail?—Quite so.

18090. I do not wish to take you into details with regard to that, but generally if we are to reform our public administration with regard to foods for this purpose the lines which you are indicating are rather an extension of the application of the present Merchandise Marks Act, subject of course to modifications and regulations, and so forth. It is in that spirit?—That is so.

18091. Then any administrative authority which took action for this purpose, of course, would, in the case of spirits, be greatly facilitated by the fact that up to a point we have Customs and Inland Revenue control for revenue purposes?—Yes.

18092. Then with regard to whiskey, you think it is reasonable that protection should be given to those who desire to buy, and those who wish to sell, a particular type of whiskey by a stricter supervision of trade descriptions. You think this might be done with comparatively little interference with the ordinary course of trade?—That is my opinion.

18093. With regard to brandy and other foreign spirits the knowledge of the origin of the spirits cannot be obtained fully without information supplied by the foreign and colonial Governments, or by the authorities in the country of production?—That is so. Without the co-operation of the foreign and colonial Governments of course we could not do it.

18094. We have had some evidence in the case of brandy in France, or rather in the case of Cognac, of the methods which are being adopted in France with the object of providing official statements as to the origin of the spirit that is produced, and those state-

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ments apparently would be already available to the trader if he asks for them. I do not know how far there is anything similar in other countries, but taking the question broadly, can you say anything from your experience as to whether there is great difficulty in obtaining any co-operation with the administrative authorities of other countries with regard to foods?—Of course we have not very much experience at present, but as regards agricultural produce we have experience of two countries, Denmark and Holland. We have had no difficulty; I mean our authorities here have had no difficulty in entering into arrangements with the authorities of those countries with the view of protecting the nature of the produce which is exported from those countries to this country. We are on very good official terms, and those terms have enabled a great amount of fraud in one case to be put down.

18094*a*. You are speaking with regard to butter?—I am speaking of butter with regard to Holland. As regards Denmark, which was the other country I was referring to, we have not very much cause of complaint—in fact I may say we have no cause of complaint—but now and again it happens that a sample of butter which is received through the Customs, and which is analysed at the Government laboratory, is rather suspicious in its nature, and we have a working arrangement with the Danish authorities that instantly a case of that kind arises the Danish authorities investigate the allegation and discover what is the cause of the complaint. The cases arise frequently, or most frequently in this way, if you will allow me to develop that idea.

18095. I think it would be very interesting to the Commission?—The Commission is probably quite aware that the character of the butter depends very largely upon the period of lactation of the cow from which the butter-fat is derived. When the cow is becoming stale the amount of the glycerides which are characteristic of butter begin to diminish, and as a consequence the number which indicates the relative proportions of these characteristic fats in butter begins very seriously to diminish, and the presumption might be raised that that butter was mixed with a foreign fat. One or two cases at the most have occurred in Denmark, they are not very frequent, because in Denmark the methods of dairying have been very carefully studied, and arrangements have been made whereby the period of calving of cows, speaking of herds generally, is extended over the whole of the year, and in that way remarkable uniformity in the character of the butter is secured. There are, however, a few proprietors, especially in one or two large estates, who do not conform to modern methods of dairying. They are conservative in their character, and they still persist in adopting what, I am bound to say, is the general practice in this country, and in Ireland too, of allowing the cows to calve at one period of the year. Now butter which is produced from that one particular estate to which I was referring in Denmark did show this suspicious character. The matter was reported to the Danish authorities, and they went into it. They have ample powers of at once taking magisterial action and obtaining sworn evidence. The whole circumstances of that case were promptly enquired into and reported upon, and the exact facts as to the origin of that butter came out. It was a genuine butter, but it was a butter produced in this somewhat abnormal way. In the same way as regards Holland we have a similar working arrangement. The Dutch proprietors have banded themselves together to protect their interests. Owing to the state of the political parties in Holland for many years past it was quite impossible to get any legislative action on this question, and the various proprietors and large butter producers, especially in Friesland and Groningen, banded themselves together with the view of protecting their industry against the nefarious operations which were going on in certain towns in Holland, more particularly in Rotterdam and S'Hertogenbosch, and one or two other places, and eventually by co-operation they hit upon a method which absolutely controlled the character of the supply in such a way that they were able to give efficient guarantees as to the character of their produce. This action was taken with the benevolent co-operation of the Government, and eventually when it was so far perfected the Government took charge of it and ratified by legislative enactments that which had been proved to be perfectly possible, and to be attended with benefit. Now that is the law in Holland. In that case, too, immediately any case of suspicion arises we can go back to the authorities in Holland; the butter is ear-marked by the labels which are attached to it; it is exceedingly difficult to forge those labels, or to play any illicit tricks with them. When, therefore, the Dutch control butter gives rise to any suspicion at all it is perfectly easy to trace the butter to the place of manufacture, and to trace it all along the line, so to say, until it came into the hands of the retailer. Now, as a matter of fact, that system works so admirably in Holland at the present time that the adulteration of butter which went on to an extent which was very seriously interfering with the Dutch butter trade has been practically stamped out.

18096. You are referring now to the work done at the Government Laboratory in controlling the imported butters under the powers given by the Sale of Food and Drugs Act, 1899?—Yes.

18097. In that instance the action taken abroad and encouraged, or sanctioned, or initiated, as the case may be, by the Governments concerned has been of material assistance to our administration?—No doubt.

18098. For example, in this particular case I presume that, with your present knowledge and experience of the Dutch and Danish systems, it is not necessary to examine so systematically and so frequently these control butters as other butters of unknown origin?—That is so. We do, as a matter of fact, still continue to examine both Danish and Dutch produce, but the examination is rather done for statistical purposes and to keep ourselves informed as to what are the necessary and essential diagnostic characters, so to say, of pure butter.

18099. That general experience accords with the experience that we have had at the Local Government Board recently in making regulations under the Public Health (Regulations as to Food) Act of 1907 with regard to requiring certification of particular meat foods as having been inspected in a particular way. Our experience has been very parallel with yours, that the countries concerned are extremely anxious, in view of the great importance of Great Britain as a market, to do anything that is reasonably asked of them in that way?—Quite so.

18100. That feeling of co-operation between countries with regard to the repression of adulteration and getting greater purity of food is rather increasing, is it not?—No doubt. We shall hear a great deal of it in this coming Whitsun week in connection with the forthcoming meeting of the International Congress of Applied Chemistry.

18101. (*Dr. Cushny.*) In what quantities is this Dutch or Danish butter sold to the customers here?—Do you mean what is the actual amount sold?

18102. When a customer goes to a shop how is he protected from getting falsified butter?—He is protected by the Merchandise Marks Act. For example, in the case of Danish butter anybody who falsely indicates a butter which is not Danish butter is amenable to the common law. As regards the Dutch butter, the seller of the article not infrequently exhibits the actual label, which is of itself a protection.

18103. But cannot he change the labels from one piece of butter to another? I am entirely ignorant of this butter trade, and I want information. Our difficulty has been when anybody has proposed to certify brandy or whiskey that is sold in a bar the whiskey or brandy is poured out of a bottle into a single glass. The bottle may be labelled, but it may not be the same brandy as the label indicates. How would you prevent that sort of thing in the case of butter?—You cannot absolutely prevent it, any more than you can prevent a man substituting margarine for butter, but he is amenable to the law if he does substitute it, and if he does substitute for, we will say, Dutch butter with a given label, and the authorities over here in the interests of the Dutch Government—because I should point out that both the Danes and the Dutch have their agents over here who are watching the working of this check system, and are continually on the look-out for the possibility of that kind of substitution—if they have reason to believe that a retailer is making use of a label and transferring it to another butter, and they have reason to know that that butter to which he does transfer it is not really Dutch produce, or is

not the produce that the label indicates, they can purchase that, and they can at once verify whether it is by reference to the analytical facts in connection with that butter which are known in Holland.

18104. Can you detect Dutch butter from English butter?—No, not necessarily, but concurrently with the label every sample of butter which is sent out from Holland is analysed. They know its particular characteristics, indeed all the things required to identify it are known, so if the Dutch agent, or if I, for example, acting in virtue of the understanding we have with the Government, got hold of a sample of this butter which we have reason to believe is not of the character indicated by the label, we could at once apply to the Dutch authorities and say that a certain sample having such-and-such marks upon it is thought not to be genuine Dutch produce. We can ask for the indicative analytical results of that butter, and if we find that the butter which we have purchased has not those, then there is a *primâ facie* case raised that the thing is not right.

18105. (*Dr. Adeney.*) What is the smallest amount of butter that bears the descriptive label from Holland or Denmark that goes into the retail market?—From a 7 lb. keg—I forget what it runs down to, but something very small.

18106. Down to a lb?—No, it is not shipped in lb. packages.

18107. (*Dr. G. S. Buchanan.*) As regards the protection of the purchaser at the retail shop, I suppose it would rather come to this, that if a man was selling a butter not Danish as Danish butter, or butter not Dutch as a Dutch butter, then probably the Danes and the Dutch people concerned would look after themselves under the Merchandise Marks Act?—Yes, they have done so.

18108. But apart from that, this system of butter control does a good deal more than merely protect the Dutch and the Danish butter as such, because it enables the retailer to get right down to him an article which he at all events knows to be butter and is guaranteed to be butter?—And of a known origin.

18109. And, therefore, you have only one question administratively, and that is whether the retailer is selling the right article?—That is so.

18110. That, of course, is a matter where the administration under the Food and Drugs Act would primarily come in, to decide whether the article sold was butter, and not so much whether it was Danish or Dutch butter?—The great advantage of the system is that it takes away from the fraudulent trader one method of defence which he originally had, namely, that he was ignorant of the true nature of the article that he was selling. He has now every means of informing himself accurately of it so that practically he is made directly and personally responsible for what he is selling in a way that he could not be made before.

18111. That confirms the views you were expressing to us just now?—Yes.

18112. (*Dr. Bradford.*) Do you think that any corresponding system should be applied to spirits?—Do you mean spirits in general or brandy for example?

18113. I take it in the case of brandy it would be easier than in the case of whiskey?—You mean that in the case of brandy something like a similar system exists in France.

18114. Do you think a similar system is feasible in the case of brandy?—I think so. I do not think it is quite so easy as in the case of butter, but it is possible. I believe a better assurance of the authenticity of the thing could be got by making use of the machinery which already exists in France. I have a very imperfect knowledge of it, I ought to explain, but from what I have read it is practically as a system to some extent in embryo, it wants crystallising out, but still it is on right lines, and if there was a demand on the part of this country for a proper system of authentication, I think it would be possible to bring pressure to bear, pressure which the French Government would be probably quite willing to have brought to bear upon them with a view to the perfection of the system.

18115. But in the case of butter, as far as I understand, the working of the system turns very largely on the accuracy of the chemical analysis?—Not always—oh, no, that is only ancillary to the thing and supplementary. It is the system by which the labels are issued and the control which is exercised upon the distribution of the labels.

18116. And, therefore, the fact that in the case of spirits the analytical data, as far as I understand, are not capable of such accuracy, as, for example, in the case of butter, would not be a bar to a similar method being employed?—No. In the case of spirits, as I explained to the Commission yesterday, the analytical data which we can get are quite sufficient for the purpose of authentication. We are perfectly clear about that. Capable of improvement as they are, they are nevertheless sufficient to enable us to say whether that is the spirit which it is alleged to be if we have the opportunity of comparing the samples as sold with that which it is alleged to be.

18117. Does that apply to both whiskey and brandy?—It would apply to all forms of spirit. There is no difficulty whatever in saying whether two spirits are identical.

18118. Even in the case of gin?—Even in the case of gin.

18119. (*Dr. Adeney.*) I gather from you you think a system of control for whiskey in this country would be feasible although it might be difficult?—I should like to know exactly what you mean by a system of control in the case of whiskey. Do you mean that the Excise authorities would be able to control, for example, the whiskey?

18120. No, I have not that in my mind. I mean the same principle as the butter control that you have just been describing to us?—I think that if the matter was sufficiently urgent the whiskey producers of this country might co-operate exactly in the same way, or, at all events, on the same principle that the butter producers did in the various Dutch provinces with a view of protecting their genuine trade interests. Certainly, I think they could do that.

18121. (*Dr. G. S. Buchanan.*) Pot still whiskey or the Highland malt whiskey?—Certainly. By some system of mutual understanding and co-operation like that they certainly could protect themselves.

18122. With benevolent interest on the part of the authorities?—Yes. As regards that of course the Excise would throw no obstacle whatever in the way—on the contrary they would do all they could to promote that kind of co-operation in the interests of fair trade and proper dealing.

18123. (*Dr. Cushny.*) Of course, for that you would want a more detailed classification than "Scotch whiskey." You could not detect fraudulent whiskey as not being Scotch whiskey?—No, that is a kind of thing which the men themselves must protect. If they who manufacture band themselves together and say: "We agree to regard the product of this distillery as Scotch whiskey"—very well, we would take that from them, and we would help them so far as we could to protect their statement that that should be called Scotch whiskey.

18124. (*Dr. Adeney.*) I see with reference to the onus of proof being thrown on the retailer as to the origin of the spirits he sells, there has been recently a case (I am quoting now from "The Times" of the 23rd March this year) in which a publican was summoned for selling brandy which contained 55 per cent. of spirit other than genuine brandy. The defendant pleaded guilty. In his defence it was said that the defendant when ordering brandy—from the merchant I take it—used the description "public bar" and "saloon bar" to denote the difference in the qualities. The brandy complained of was invoiced to him as "P.B. Brandy" and he understood that to mean public bar quality, but it was now stated by the wholesale firm that "P. B." meant "Pale British." But the interest lies in this that a conviction was obtained and it was accepted that the retailer was deceived, but still he was fined and costs were given against him?—That is to my mind clearly a case of *caveat emptor*. The person buying that spirit ought surely to know (I remember the case) but as a matter of fact he had not proper knowledge of his duty; he ought to have had proper knowledge of his duty, and if as a trader there were put certain letters before him he ought to have had wit enough to ask the precise signification of those letters. That is clearly a case where no legislative interference would ever protect a man in that way. That is clearly a case in my judgment of *caveat emptor*.

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18125. But the definition of "brandy" there as a grape spirit was accepted by the magistrate?—No doubt. I suppose it was.

18126. (*Dr. G. S. Buchanan.*) You have some observations in your *précis* on the question of the suggested institution of a court of reference for fixing standards and other regulations respecting the sale of articles of food and drink. You are rather doubtful of the value of such a court, I think. I presume you are referring there to a body such as was recommended by the Food Products Adulteration Committee of 1896?—Yes, a large body of that order. I rather deprecate the setting up of that.

18127. Such a body would have to contain representatives of at least all large bodies of traders, and would probably not be very effective for this purpose?—I think not.

18128. And you do not think that it would be desirable to give such a body general powers to enquire into and fix standards or limits for all articles of food and drink as a general thing. Your view would rather be that cases should be taken as they arise?—I think so, and even then for the reasons that I have already given to the Commission it should be done rather sparingly and only when a clear case was made out as to the necessity. I think as I have explained to the Commission the experience that we have hitherto had of the attempts to set up these chemical limits has not been altogether fortunate.

18129. You think however there might be an advantage if the Local Government Board or the Board of Agriculture or other Government departments had a comparatively small committee of persons whose opinion would be likely to command respect to whom, or to some of whom, the department concerned could refer particular questions as they arose for advice or investigation?—Yes. I think as a matter of fact the Local Government Board has already the elements of that machinery at their disposal. They can put themselves into official relation with persons in whom they have confidence exactly in the same way, for example, as the Privy Council does, or the Board of Agriculture does. Take the case of the Board of Agriculture. The Board of Agriculture have already attached to them as official advisers such persons as the director of Kew, and they have the head of the Government Laboratory, and they can call to their assistance very promptly the advice of skilled persons in the official world who can help them in official instances. In the same way the Privy Council called for and easily secured the assistance of persons who were competent to advise them with respect to points which arose in connection with the passage of the recent Pharmacy Act. Those are illustrations where I think the Local Government Board might easily secure and call in the assistance of persons who were competent to advise them.

18130. There would be an advantage in developing this into a small advisory committee of experts or impartial business men who were frequently associated with the same kind of problems and whose advice could be given on uniform lines?—I do not quite follow.

18131. You told us just now that you thought that a consultation between experts and people who are already available might be a great deal of use in these matters?—Yes.

18132. In your *précis* you say that a small advisory committee of experts or of impartial business men, if they did not themselves possess or could not otherwise obtain definite information, might be empowered to invite any person likely to possess information on the subject under consideration to give evidence. I rather gather from that that you would be disposed to develop your committee to the extent of making it a standing committee always available with the same people?—I might, but, of course, there are certain officials that probably would be permanent members of such an organisation. For example, some of the officials I have mentioned would be obvious people to be on it, but there are other persons who might be found to co-operate with that committee as the case demanded. It would all depend on the particular matter which had to be enquired into as to who the other persons who might be co-opted *ad hoc* should be.

18133. The questions to be submitted to such a committee would probably come, in the first instance, from the department concerned, and I presume would be of the nature that you have been speaking to us about, that is to say, questions whether particular definitions are desirable or whether particular limits should be imposed?—Yes. For example, take a particular case. Supposing you asked a committee, "Is it desirable to fix limits?" Then, if so, what limits should be fixed. That is the type of question that might be put to this committee. As regards their information and how they got their information, I should give them a fairly free hand to get their information from the best sources that were available to them.

18134. Then any action that would be taken on the findings of that committee and any regulations that were deemed necessary would be framed and published under the authority of the department responsible?—Yes, it would rest upon the Excise department or the Local Government Board in that particular case to take the responsibility of framing regulations, and the President of the Local Government Board would be responsible to Parliament and to the country for such regulations.

18135. And he would have behind him, if he made regulations and his action was challenged, the fact that he had submitted all the circumstances in his possession to this committee and that he was acting on the advice of that committee?—No doubt that would come out.

18136. Regulations made under such circumstances could, of course, as you point out, be withdrawn or modified as circumstances required?—Certainly.

18137. (*Chairman.*) What effect are the regulations to have? Are they to have the effect of law?—In the case of the only instance we have had where regulations have been made they have the force of law.

18138. Is there any statute in existence that would give legal effect and obligatory effect to the recommendations?—In the case of certain dairy produce of milk and butter, yes.

18139. Nothing else?—Nothing else.

18140. You would have to have statutory powers imposed?—Yes, the Local Government Board would have to get statutory powers to make those regulations, which, if promulgated, would have the force of law.

18141. (*Dr. G. S. Buchanan.*) There is just one other point I want to ask you about. With regard to the Customs examination of samples of imported spirits. That is done at a separate establishment of the Government Laboratory, is it not, under your supervision?—The Customs Laboratory is a branch of the Government Laboratory.

18142. The examination that is made there of spirits is, I presume, partly for revenue purposes and partly in regard to the description of spirits under the Merchandise Marks Act?—Yes, but I may say almost entirely for revenue purposes. We do not attempt to authenticate the origin of the things. We are, as I have pointed out, in the outset only concerned with the alcoholic value of these things as tax gatherers.

18143. There are certain cases in which the problem before the Customs chemist or before yourself is the classification of a spirit that is imported—for example, whether it is brandy or whether it is "spirits unenumerated," which, I think, is the phrase used?—Yes.

18144. Could you say on what basis any decision is arrived at on those points?—When any case arises, and it rarely does arise, as to verifying the character of the article which comes in as brandy we simply use the methods adopted in the Paris Municipal Laboratory—those that have been laid down by Girard and Cuniasse.

18145. In the case of brandy which comes in, we will say, from Hamburg or from Germany, which consists largely of grain spirit with more or less Cognac or with no Cognac, it has to be classified in one way or the other as brandy or unenumerated spirits?—Yes.

18146. Because there is a difference of duty?—Yes.

18147. Is the object of the examination to ascertain whether it is a grape brandy in order to get at the classification—whether it is derived from wine?—No. In the case of a brandy coming from Hamburg the presumption is that it is not a grape brandy.

18148. Would it, under any circumstances, be allowed the term "brandy?"—It might. We have no power to withhold the designation.

18149. If it sufficiently resembles brandy?—Yes. We are in that respect in the same position as we are with regard to British brandy.

18150. But in the case of British brandy there is a requirement, is there not, that it should be called British brandy as it leaves the compounders?—Yes, but it may drop the prefix "British" very promptly.

18151. That we understand. In the case of the Hamburg brandy, is that specially described in any way?—No.

18152. Could you say, with regard to the spirits that are made up as an imitation of brandy with essences abroad, whether those would in most cases come in the category of "brandy"?—Yes, but the greater number of those things do not come back to this country. Very few of the brandy essences, or the so-called brandy essences, if that is what you are referring to, mixtures made up of these things, come back to this country. They are usually made for exportation to the East and to Africa and China and places like that.

18153. They are sent here merely for re-exportation?—No, they are not sent here. The essences are sent out and the articles are made up occasionally in Hamburg and other places, and those articles are, as a rule, sent out to the districts or to the ports I have indicated.

18154. With regard to these Hamburg brandies I presume that analytically there is no difficulty in detecting the type to which they belong?—No, they are very similar to British brandy.

18155. And they are quite distinct from the Cognac type?—Quite—speaking broadly, of course.

18156. At the same time the majority of them are admitted as brandy into this country?—They would be. If they are presented as brandy they would be taken as brandy.

18157. And if those were submitted to the laboratory and you identified them as being practically equivalent to British brandy you would report them as practically equivalent to British brandy?—Yes, if we had occasion to report at all.

18158. But they would still be allowed the name of brandy?—Yes.

18159. With regard to rum, there is an imitation rum, is there not—a recognised class of imitation rum?—Yes, usually made in Germany.

18160. Do samples come to the Customs laboratories for determination as to whether it should be allowed the term "rum" or should be called "imitation rum"?—No doubt, but there are very few of those, and there it is only a question of the amount of alcohol.

18161. Can you give us any idea as to the extent to which samples are examined for the purpose of checking their description; whether it should be "brandy" or "unenumerated spirits" or "rum" or "imitation rum" in the course of a year, say?—I could get you that information, but I do not know how many samples actually are being dealt with. Details of that kind will be found in my annual reports.

18162. The analyst at the Customs would in some way, I suppose, be in a better position for judging what this imported spirit consisted of than the public analyst. He would have plenty of samples, and he would have comparisons and all your experience in your laboratory to guide him?—No doubt. He could have unlimited supplies, of course, and he could have a great deal of information concerning where it came from.

18163. Does the examination made in the Customs Laboratory in any case extend to checking a specific description, such as Cognac brandy?—No. The very highest class brandies are very seldom examined, simply because the importer of those pays the highest rate of duty on them. It is worth his while to do that rather than to sacrifice the amount which would be required for our testing the strength. Rather than put up with that sacrifice the merchant in the case of the higher priced brandies is usually willing to pay the higher rate of duty, rather than have the bottles broached, or opened, for the sake of furnishing us with a sample. Hence we do not frequently get the very highest priced brandy to examine.

18164. With regard to British brandy, which I suppose is rather parallel to the German brandy, we have had some representatives of the trade here who have said that various compounds are used which are very specially regarded as trade secrets, and that they could give no information to the Commission with regard to them. Is information with regard to those constituents furnished to you, or furnished to your laboratory systematically?—Yes, but I hope the Commission will not ask me to divulge information which has been given to me confidentially.

18165. We should not wish to do that?—I may say exactly what the attitude of the Board of Inland Revenue has been with regard to this class of things. Where these so-called essences are really *bona fide* of the nature of essences, that is to say, that they are the concentrated products of the fermentation of grain—because we in England are not concerned with the manufacture of brandy properly so-called—if those essences are really in effect true essences we do not consider that we have any power of interference, but if the so-called essence is made up of substances which never have been, and never can be, present in whiskey, or as the product of fermentation of grain, we deprecate the Excise being approached with the view of paying rebate on the alcohol which is contained in that class of thing, and we have consistently refused to pay rebates on factitious essences of that kind.

18166. That is indirect pressure?—Yes.

18167. Is that in the case of essences added for the purpose of making a whiskey?—Yes.

18168. With regard to brandy will the same thing apply?—It will. We do that in the interests of the other country with whom we wish to establish the kind of relations that you have indicated. We try and protect them in return for the protection which they will extend to us.

18169. Can you say generally whether the substances that are added in the case of British brandy are very numerous and varied in character?—Some of these so-called essences are extremely complicated in composition.

18170. It hardly seems to me that a British brandy which consists of a basis of grain spirit, and then has these varied additions, can quite be reconciled with brandy as a substance derived from the distillation of wine, which appears to be the generally accepted definition of what brandy should be?—Some of those articles are not, and they cannot be, obtained from the distillation of wine. Before you pass from that may I point out rather a remarkable fact connected with these essences? All attempts to make a palatable whiskey by the addition of a true essence, namely, a mixture of the higher alcohols, furfural, and all the other ingredients which we recognise to be present as indicative things in whiskey—all attempts to make a whiskey by adding those things to plain spirit have failed. The essence compounders have tried to make use of what you may call the legitimate constituents, and they have never been able to make a merchantable whiskey in consequence of that, which is further corroboration of what I ventured to bring before you yesterday, that there is a great deal more than those things which we are accustomed to look to which are concerned in giving the aroma, flavour, and the general desirable character to whiskey.

18171. Would your knowledge of what is used by the compounders stop at essences which contain alcohol, and are therefore submitted to you in one way or another, for the drawback, and the rest of it, or are there other non-alcoholic substances which would be used without your knowing about them?—All essences contain a great many things which are not dutiable. They are presented to us merely to give back to the merchant the amount of duty which he has paid in the spirit which he has used to prepare those essences. We are not concerned with any other aspect of them than that. He claims a certain rebate, and he makes a declaration of the amount of rebate that he wants, and we test his assertion by really only determining the alcoholic value, and we pay him simply what the results of the analysis show he is entitled to.

18172. That I understand, but my question was whether, in addition to true essences containing alcohol, which therefore would come in the way of your laboratory, there would be other substances, not alcoholic solutions at all, which are used in the compounds?—No, those would not be brought to our knowledge. Do you mean in connection with the work of the tincture regulations?

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18173. No, I was thinking of the manufacture of such articles as British brandy and compounded spirit?—No.

18174. We have had evidence from one compounder to the effect that only about one-third of the materials he used were essences—that was his phrase. I wondered what the other ingredients might be?—We should not have any official cognisance of those things. Of course, we should have official cognisance of caramel because that is derived from sugar, and sugar is a dutiable article, but the various flavouring materials which he used we should not have any cognisance of.

18175. I should like to ask your personal opinion with regard to these brandies, which consist mainly of grain spirit, or which are made up like British brandy, or Hamburg brandy. Do you think it is desirable that they should always be distinguished to the public by a name which is different from brandy, as you have defined it?—Certainly, I think it is desirable. When a man sells British brandy he should, under no circumstances, be allowed to drop the prefix. In the same way if he sells German brandy, or Hamburg brandy, he should retain that prefix.

18176. You would not agree with the testimony of those compounders who have come before us, that although they invoice their materials as British brandy to the publican, the publican has a perfect right to sell it as brandy without any qualification to the consumer?—No, I think, as I have already indicated, that is the direction in which reform is required; I mean to say it is necessary that the purchaser of an article should have reasonable facilities given him for acquiring a knowledge of what he is actually buying.

18177. (*Dr. Bradford.*) I gather from your *précis* that in the course of your experience you have not found on many occasions poisonous or highly injurious substances in spirits that have been analysed in your laboratory?—No, nothing that we could call injurious—in no case except in such things as absinthe and things of that sort. The ordinary spirits, whiskey, gin and brandy, have contained nothing which could be called poisonous in the proper sense of the term.

18178. Does that apply also to compounded spirits?—Yes.

18179. Have you come across any case in which methyl alcohol has been present in compounded spirits?—You mean where methylated spirit has been added?

18180. Yes?—There have been such cases.

18181. But that is not at all a frequent occurrence?—Very seldom.

18182. That would come under the definition of a highly injurious substance, would it not?—Of course we, as revenue officers, should go for that article quite irrespective of any question of its being deleterious or not.

18183. I quite appreciate that you have only to look at these questions from the point of view of the revenue?—Yes.

18184. But incidentally you may acquire information as regards the presence of substances that are known to be injurious to health?—As regards the presence of methyl alcohol, of course a great amount of additional information has been accumulated of recent years with regard to the specific action of that substance, and especially from the United States, where considerable quantities of methyl alcohol, or rather wood spirit mixed with ordinary alcohol, have been sold, especially in the Southern States of America, and that is known to be extremely noxious. These cases have been medically investigated, and it is now known with certainty what the specific action of methyl alcohol is, and it has been proved to be a very much more dangerous alcohol than was surmised.

18185. But as the result of your experience you are enabled to say that such additions as that are very exceptional in spirits consumed in this country?—Very rare indeed.

18186. And that applies to all spirits, even these spirits we have heard about at fairs, and raw and cheap spirits, and so forth?—Yes. Those articles that were collected for the purposes of the Commission, and which were examined by us, are representative of what is sold in these places, and we were not able to discover any deleterious article in them.

18187. You are definitely of opinion that the common statement that highly deleterious substances are present in new and raw spirits is devoid of foundation?—We can find no evidence of that.

18188. Can you tell the Commission anything with reference to the toxic substances being present in the distillate derived from bad materials?—I cannot. I have only a very imperfect knowledge, and that knowledge is really derived from reading. I have no knowledge of my own on that point. I am rather sceptical on general grounds of the occurrence of these toxic substances in material which is said to be more or less bad to start with. Nothing, perhaps, could be fouler and more offensive, for example, than beetroot residues, but it is quite possible, and as a matter of fact it is done, that the cleanest possible spirit is obtained from this material—in fact, some of the highest class perfumery spirit, and perfumery spirit must be for the purposes of perfume as free as possible from any adventitious or foreign substance, and that can be made, and is made very largely, from these beetroot residues, which, to begin with, are extremely offensive. Therefore, in that case, certainly no products accompany the distillation of it, or if they did in the first instance, say in the low wines, they may be produced from these things that are quickly got rid of by a subsequent process of distillation and rectification.

18189. With reference to the flavouring agents and essences that we have heard about, have you in the course of your experience found any evidence that any of these are toxic—highly toxic?—No, I have not had occasion to give any special attention to that point.

18190. We have been told on several occasions that essences of unknown composition, so far as we know, are added to the various spirits, and of course it is desirable to know whether any of these essences contain substances injurious to health?—I should have no knowledge of that. That class of article would only come before me in connection with the working of what we call the tincture regulations. They would be presented to us in the form of tinctures, or essences, and we are only concerned with the alcoholic value of those, of course.

18191. (*Dr. G. S. Buchanan.*) Would essential oils come to you?—Exactly in the same way. A large number of preparations are made containing essential oils, but we are only concerned with determining the amount of alcohol which they contain for the purpose of paying back the merchant what he has incurred in paying the duty for it.

18192. (*Dr. Bradford.*) I gather from your *précis* that absinthe is but little used in this country?—Yes, and generally by the foreign population in England.

18193. The quantities are not large?—Very small.

18194. (*Dr. Adeney.*) One or two questions with reference to the evidence you have given us as to the desirability of protecting geographical names as far as possible for the benefit of the legitimate trader. Those geographical names would necessarily carry some association as to the quality and flavour of some kind, would they not?—They might, or might not.

18195. Take Scotch whiskey. Would you say that the word "Scotch" should be applied to patent still spirit equally with pot still spirit?—Yes. I do not know why it should not. It depends on the point of view with which you are going to fix the geographical name. If the patent still whiskey was made in Scotland, from one point of view it is Scotch whiskey.

18196. You say that a trader who built up a reputation for a given article from a given locality should be protected in the exercise of that trade. I suppose you would agree with me that the reputation of Scotch whiskey is built up on the pot still product?—No doubt.

18197. Of course whiskey originally was made, and the reputation of whiskey was originally made, by virtue of the pot still, and the same with regard to Irish whiskey?—That is so, but whether you should exclusively call whiskey Scotch whiskey that has been made in a pot still alone is a matter on which I have a doubt.

18198. Perhaps the difficulty would be got over by the producer calling his spirit: "Scotch pot still spirit," or "Irish pot still spirit," as the case may be?—Certainly.

18199. And there he would be protected?—Yes, and in the same way if he sells a pure patent still whiskey (which, of course, he does not), he could call it "Scotch patent still whiskey."

18200. The only question that arises there is the difficulty of the blends, but no doubt that difficulty would largely disappear when you consider side by side with the blend the price paid for the blend?—That is a matter which I would leave, as I have said, to the organisation which I hope may be created by the various distillers to protect their own interests, precisely in the same manner as the Dutch butter producers, and the Danish butter producers, band themselves together to protect their legitimate interests.

18201. No doubt it would be possible for the producers of the highest blends to attack any retailer who sold the lower blends at the price of the highest blends?—Certainly, they would naturally do that. You may have noticed that since this Commission has been sitting there is a very significant change in procedure. We are told much more frequently: "This Scotch whiskey is a blend," and even in some cases the exact proportion is given of patent still and pot still whiskey. Now, reputable concerns are beginning to take the public much more into their confidence as to what the precise nature of the blend is than they formerly were. It was because in many cases the public did not demand that information that they did not get it. If the public had insisted upon it they would have got it at any time.

18202. With regard to the methods of analysis, I quite sympathise with the perfectly organised laboratories under your charge that you think in questions of identification chemical analysis is extremely helpful, but do you not think in the interests of public analysts that some attempt should be made by a suitable body or authority to standardise methods?—I think in many cases it would be convenient that there should be some agreement on a question of this kind, as, indeed, there has been an agreement in the past. I will give an illustration, for example, of how an agreement was easily arrived at. I am not aware that it requires any legislative power to bring it about, but when the Board of Agriculture defined margarine, and required that a statutory limit of not more than 10 per cent. of butter should be present in all margarine, the difficulty arose at once as to how the analysts were to determine this 10 per cent. of admixed butter in the margarine. There was no difficulty in the Government laboratory, which was, of course, the ultimate referee in cases of dispute, and the general body of the analysts, as represented by their association, the Society of Public Analysts, in coming to a working arrangement as to what methods should be used for the purpose of a *primâ facie* statement, and, in the next place, of controlling it. I think in the same way with respect to the analysis of spirits it would be perfectly easy to come to a working understanding as regards the adoption of uniform methods.

18203. That probably could be very well done by this standing committee of the Local Government Board to which you have been referring?—Yes, they could require the two bodies mainly concerned to bring about such an agreement.

18204. I notice that in answer to Dr. Bradford's question as to anything being injurious in the essences that are used for fabricating or flavouring spirits artificially, or in raw spirits, that you said there was no evidence that any of the articles that are found in new spirits, or used artificially, are injurious?—I have no evidence.

18205. Of course, that is purely negative evidence?—Yes.

18206. They may be, for all we know, injurious?—Yes, but with regard to those articles, the names of which have been given to me in confidence when I have required the person depositing these articles to tell me of what they were made (and I have reason to believe the information given to me was perfectly correct), I do not recall any single instance, surprising as the composition of some of those articles were, that could be considered injurious to health.

18207. But still, I suppose, as far as insuring the safety of the public in consuming these things is concerned, it is safer to rely on the natural products which we have had experience of on the systems of generation after generation than on any new concoctions?—No doubt.

(*Chairman.*) I am very sorry that a slight indisposition prevented my hearing your evidence yesterday, because all my colleagues agree that it has been of the greatest use to the Commission. I shall read it very carefully, and I hope to get that information that they have derived from it. We are very much obliged to you, Dr. Thorpe, for the evidence you have given.

The witness withdrew.

Colonel Charles Edward Cassal, V.D., F.I.C., called.

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18208. (*Dr. Adeney.*) You are a Fellow of the Institute of Chemistry and Past Censor of that Institute?—Yes.

18209. You are public analyst for the City of Westminster and for the Royal Borough of Kensington and for a number of other localities?—Yes. I am also public analyst for the Metropolitan Borough of Battersea, public analyst for the Administrative Counties of Kesteven and Holland (County of Lincoln), and Official Agricultural Analyst for the Administrative County of Kesteven, Lincolnshire.

18210. You have considerable experience in practice as an analytical chemist?—I have had such experience for a period of thirty years.

18211. You have read a copy of the terms of reference to this Commission?—I have.

18212. You have been engaged for the purpose of giving evidence on behalf of your own and other authorities in support of certain prosecutions in connection with the sale of brandy?—Yes.

18213. What have you been led from your experience to regard as brandy? What is your definition of brandy?—I consider that brandy is an alcoholic liquid derived from the fermented juice of the grape, or wine, by distillation in a particular manner and in a particular form of apparatus.

18214. What would you term that apparatus?—Some form of pot still.

18215. Do you mean by some form of pot still having varying degrees of fractionation?—No. I might perhaps put it better in this way: Brandy is an article that should be obtained by the distillation of wine, meaning by that term the fermented juice of the grape, the said distillation being conducted in a particular form of distilling apparatus—an apparatus, namely, which does not bring about the destruction or elimination of certain bye-products which are present in properly manufactured or true brandy and which give to the latter its peculiar characteristics.

18216. With regard to the French laws on this subject, does that definition of the liquid to which we give the name "Brandy" hold in France?—That I can only speak of from reading knowledge. I have not seen the method of the production of brandy in France, but it is a matter of common knowledge that the original method consisted of the use of a pot still and that the process applied did not result in the elimination or destruction of the bye-products I refer to.

18217. We gather from you that the only French brandy that would come under your definition in France would be the Cognac brandy?—Because other stills are used, you mean, in other districts?

18218. Yes?—It depends how those stills are used. You can use stills in different ways. You might be able to obtain by means of a more improved and modern still an article that might be called brandy.

18219. It depends upon the degree to which you carry rectification?—Quite so. The degree of fractionation, in point of fact, and the nature of the apparatus, and the way in which it is used. You can use fractionat-

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ing stills in such a way as not to produce the degree of fractionation required to obtain "plain" or "featureless" spirit.

18220. That does widen your definition?—Yes.

18221. In your opinion the ordinary purchaser in this country believes that brandy is made by the distillation of wine?—I think so, and I think that that fact is, perhaps, the most important determining factor when a public analyst is called upon to deal with a question of this kind. Until very recently, if I may develop the point, the only process of analysis applied to samples of brandy taken under the Food and Drugs Acts was for the purpose of ascertaining the strength—to see whether there was an infringement of the Amendment Act of 1879—and occasionally for the purpose of detecting the presence of poisonous metals—which used to be done sometimes. When the matter was taken up and the Islington case was heard and decided the definition of brandy from the public analyst's point of view had to be enlarged, and every public analyst had to make a definition for himself. He based that definition, no doubt, largely upon what "the man in the street" expects to get when he asks for brandy, just as in the same way as when a man asks for beer you have to consider what the public generally expect when they ask for beer. My view is that the public expect to get an article made only from malt and hops. As a matter of fact, they do not get such an article in the large majority of cases. What I mean to suggest is that what "the man in the street," the ordinary fairly intelligent individual, expects to get, forms the basis of a definition when there is no official or scientific definition in existence.

18222. Then as a public analyst, I take it that you would regard with satisfaction the creation of an authority whose duty would be to frame definitions?—Certainly.

18223. Or frame regulations for guidance as to the composition and quality of foods?—I should, very much, because I think it is not only extremely unfair, but it is detrimental to the public interest that officials, like public analysts, should have these problems thrown at them, and should have, in all probability, to carry out lengthy researches which they have neither the means nor the time to carry out, simply because there is no machinery in this country whereby these matters can be studied at the Government expense, and such questions settled.

18224. The public analyst is in that particular placed in a false position?—He is placed in a very false and a very difficult position, because under existing conditions these things have to be threshed out in a court of law, and if he has issued a certificate based on what knowledge he has been able to gain on the subject he has to defend that certificate, and in many cases he risks injury to his professional reputation, and possibly the loss of his official position.

18225. I see the principal standard now accepted by British public analysts is that known as the ester standard?—That is the principal standard.

18226. Are you satisfied, yourself, from your own experience, with that standard?—I am, if the indications afforded by the ester figure are borne out by the other analytical data obtained, and if it is not used as a rigid standard. It is quite absurd to suppose that in analyses of this kind you can base absolute conclusions upon rigidly fixed standards; I mean to say, supposing a sample of brandy yielded 75 or 70 grammes of esters as ethyl acetate to every 100,000 cubic centimetres of absolute alcohol present in the article, no public analyst in his senses would venture to certify adulteration in a case like that, on that figure alone—regarded by itself. It is too near, and in the absence of any other confirmatory evidence, such as a very low volatile acidity, and a very low figure for higher alcohols, he ought certainly not to do it. The conclusion arrived at depends upon the inferences to be drawn from all the figures, the ester figure being probably the most important.

18227. Of course, you are aware that the Technical Committee of Œnology instituted by the French Minister of Commerce in 1904 refused to formulate any standard or even a minimum or maximum limit?—They were in the fortunate position of not being compelled to do so. The public analyst has had to do it whether he liked it or not. There may also have been ulterior reasons for the course taken by the Committee referred to.

18228. So he possibly has suggested a higher standard than they would?—Very possibly. In fact the limit of 80 is certainly low.

18229. You consider that low?—I consider it very low, because taking brandies you buy in the market at a good price—taking them haphazard—it is rare indeed that you get anything approaching so low a figure as 80 for esters. I have got a certain number of cases here, a variety of brandies bought in the open market, and there is not one of them in which the ester figure falls below 100.

18230. Have you any reason to believe that that was assured beforehand by the producers?—Not in these cases. These are all fairly high-priced brandies, and when the producers have assured a high ester figure in the way you suggest the esters are very much higher than these, which vary from 104 to 120. There is one case of 235, and that I should say is suspicious from the point of view you mention. If they do that sort of thing it is generally overdone.

18231. Do you think it is a good thing for the public that a standard of this kind should be put forward, apart from other considerations of quality and taste?—I think that is a very difficult question. There is no doubt that if you fix a limit of any kind it will be worked down to or up to, and I am not prepared to say that the public is very much the better for it. But then you must do something. You must draw the line somewhere, as in the case of milk. The standards fixed by the Board of Agriculture at 3 per cent. of fat and 8·5 per cent. of non-fatty solids in the case of milk produces the result of working down the good milk to those lower standards for the sake of profit. At the same time, you could not apply repressive legislation effectively in the case of milk unless something definite was laid down—sufficiently definite to give presumptive evidence, or to create a presumption, to use the phrase of the Board of Agriculture, that the article is not genuine. In the same way I would suggest, with respect to brandy, that an analysis indicating the probable presence of spirit other than spirit obtained by the distillation of wine should create a presumption that the article is not genuine until the contrary is proved.

18232. (*Dr. G. S. Buchanan.*) That is the case at the present time under the Sale of Food and Drugs Act, is it not?—Yes, because all these cases have had to be fought out and all the difficulties have had to be gone into in precisely the same way as one used to have to do it before there was any official standard for milk. If the case is appealed against it means there will be a long hearing with scientific evidence on both sides; in fact, the usual contested scientific case, which, of course, is very expensive. That is due to the absence of anything in the nature of an official standard. The public analyst has created his standard on which he bases his certificate. The defendants' experts appear and dispute that standard, and it is exactly the same thing that used to occur in the case of milk before the Board of Agriculture fixed a standard.

18233. (*Dr. Adeney.*) Do you think it is competent to the public analyst to take cognisance of the taste?—No, I think not. In order that the taste-testing business can be applied it must be carried out by people who have trained themselves for that purpose, and, of course, inasmuch as a public analyst has to deal with all kinds of food products, if he had to be an expert on taste in every one of them his burdens, which are already quite heavy enough, would be considerably increased; and, moreover, that system of judging articles like brandy, or tea, or sugar, by taste is extremely risky unless by some means or other you can confine it to people who have proved beyond all doubt that they really have the capacity to distinguish by taste. I have seen that testing by taste carried out occasionally in courts of law, where so-called trade-experts have appeared and have asserted that they are capable of distinguishing by taste between, say, a sample of Demerara sugar and a sample of dyed crystals—beet sugar coloured with aniline dye. The results have never been encouraging, because these gentlemen have contradicted themselves most terribly on these points, and even the Demerara experts have asserted that dyed sugar crystals consisted of Demerara sugar when the test has been put to them in such a way that they did not know where the article came from. But I think that in cases of people like M. Hennessy or M. Martell, or any other person who

has devoted his life to this particular subject and has cultivated his taste, they may give very valuable indications, but the public analyst is not a person *qua* public analyst who is capable of doing that, I think.

18233*a*. Why I asked you that question was this: the Commission found in France that such producers as you have mentioned, M. Hennessy and M. Martell, are guided entirely by taste?—Quite so, I have no doubt that such is the case.

18234. I have had occasion myself to analyse brandy for at least one of these firms I refer to, that is to say, their bottled brandy, and I have found a remarkable uniformity in the composition side by side with their uniformity of taste. I was wondering whether that has been your experience?—No, I have never attempted the tasting test.

18234*a*. You have not worked side by side with a taster?—No.

18235. I do not mean necessarily yourself being a taster, but you have not worked in conjunction with an expert taster?—No, I have had no experience of that at all.

18236. I see you would limit the term "brandy," or you would not permit the term "brandy" to be used for any article which on analysis yields a substantially lower figure than 80 for the esters?—It is not permissible to apply the term "brandy" to any article which, on analysis, yields a substantially lower figure than 80 for esters, and when the other data confirm or materially tend to confirm the view that the low ester figure is due to the presence of plain alcohol. You must take that figure with others. It is very much like the formation of an opinion on a water supply. You base your opinion in the case of a sample of water not on any one particular analytical figure, unless it is an absolutely outside and decisive figure, but on inferences drawn from the consideration of all the data that you can obtain, and the actual process of doing that is one in which experience, of course, counts for very much. The more experience that a man has in the analysis of water the more readily will he be able to draw correct inferences by a consideration of the whole of his figures, and in the same way this applies to brandy. A mere blind acceptance of the standard of 80, and the assertion that anything that departs from that therefore indicates adulteration is not at all the right course to take.

18237. But I take it from some of your former remarks that you would stop rectification with your still at the point where it begins to yield a lower figure?—Oh yes, I think so, because you are then producing an article which is not in accordance with the composition of the article which has been known as genuine brandy for so long.

18238. Have you got any evidence in proof of that assertion? Would it not be quite possible to carry the rectification a good deal higher than that, that is to say, to get less secondary products and still have very markedly the characteristic flavours of brandy?—Yes, I daresay it may be so, but that is why I think you must have a limit somewhere, and the 80 limit in the case of esters, I think, is a fair practicable working limit, simply judging by what I was saying just now from what one finds if you take a properly priced article and buy a sufficient number of samples of it in the open market.

18239. I see later on in your *précis* that you would only allow the use of the patent still if the result of the use was to produce a deficiency in bye-products?—If the result of the use of such a still was *not* to produce a deficiency in bye-products.

18240. If you could obtain a spirit with the full quantity of bye-products you would allow the use of the patent still?—Yes. It does not matter how you produce it so long as you get your characteristic bye-products in adequate amount and you distil from wine.

18241. Now with regard to the question raised by those who object to any interference with the sale as "brandy" of any alcoholic liquid coloured and flavoured to resemble brandy. You say in your *précis* that it has been contended that the term "brandy" merely means "brandy flavoured alcohol," no matter from what source that alcohol is derived. You regard that as an untenable position?—Yes, for the reasons already mentioned that the normal composition of the article known as brandy within fairly wide limits has been known for so long, and with regard to the contention that "brandy flavoured alcohol" means "brandy," if that principle were carried to its logical conclusion with regard to various other food substances the position would be ridiculous. You might then say that butter is margarine flavoured with butter.

18242. You give a number of statements of what you consider brandy should be?—I say (*a*) that brandy is understood to mean a distillate from wine, and from wine only, by the use of a pot still or a modification of such a still which will give or is made to give the same result. (*b*) That the bye-products in true brandy give to that spirit its peculiar aroma, flavour and character, and are of especial importance in connection with the medicinal use of brandy—not because of any special medicinal effect that they may themselves be capable of producing, but on account of the toleration and more easy acceptance of the spirit containing them—by the invalid. (*c*) That probably each of the bye-products contributes its share to the character of the spirit—and to its physiological action. (*d*) That brandy has been manufactured for generations in such a way as to secure the retention of the bye-products—in about the amounts exhibited by authentic and genuine brandies obtainable on the market. (*e*) That "brandy flavoured" alcohols of any origin are not brandies, and that such mixtures should be described by some distinctive name or names. I do not know, my lord, whether I may be allowed to put before you one or two points which have occurred to me since I wrote my *précis* of evidence.

18243. (*Chairman.*) Yes, I think so, certainly, if you wish to?—There is, in the first place, the question of the appointment of a court of reference. I may remind the Commission that this suggestion of the appointment of a court of reference to deal with questions of this kind is by no means new, and was originally put forward before the Food Products Adulteration Committee of the House of Commons many years ago now.

18244. That was in 1896, was it not?—Yes; the Food Products Adulteration Committee of the House of Commons. I think I am correctly voicing the views of most of my colleagues amongst public analysts when I say we should welcome the appointment of a properly constituted court of reference of that kind for the reasons amongst others referred to in my *précis* that it is not in the public interest that public officials who have to do such work as public analysts have to do should have thrown upon them the heavy responsibility of deciding what is to be done with regard to such questions as these, and of then advising their authorities on such questions, and thereby possibly leading to a very considerable expenditure of public money solely because some single public analyst has come to a conclusion on matters of this sort in which he may be right, but in which, possibly, he may be wrong. The appointment of a court of reference would, I think, obviate this—a court to whom these questions could be referred, and who would have the power of carrying out scientific investigations and of settling questions submitted to them for decision in matters relating to alleged adulteration.

18245. Would you explain that a little more? You say "deciding questions submitted to them." First, who should submit the questions? Would it be in relation to some particular prosecution, or would it be a general definition?—A general definition as far as possible, but also with regard to particular prosecutions.

18246. Both?—Yes, my lord.

18247. What effect would their decision have?—I take it their decision, if the thing were legalised, would be final, or would have to be accepted, and that it would be legalised.

18248. By statute, you mean?—Yes, in the same way as the regulations made by the Board of Agriculture. But with regard to the question of cases of prosecution being referred to the court of reference, that is very important, because of the difficulties encountered by courts and benches of magistrates in arriving at correct conclusions upon the evidence placed before them. I am going to give an illustration of that with regard to the recent brandy appeal case which was heard at Reading, in consequence of a prosecution by the Berkshire County Council. In that case there was a conviction at Maidenhead for the sale of brandy which was certified by the public

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analyst to contain spirit other than spirit derived from the distillation of wine. The defendants appealed against that conviction and the case went to the sessions at Reading, where it took two days in hearing, and where scientific evidence was given at length on both sides. There are various points in connection with that case which are somewhat delicate and which I would rather not go into. I was giving evidence myself for the Berkshire County Council, and was present at the two hearings. I have not the slightest doubt that the conclusion arrived at was wrong, and that there was a miscarriage of justice.

18249. Which decision are you speaking of?—The conviction by the magistrates at Maidenhead was quashed with costs against the Berkshire County Council. I feel that, in a case of this kind, the existence of a court of reference to whom the whole question might have been referred would have been a great advantage.

18250. Do you mean by that that you would give them judicial powers or only the power to give evidence?—I would give the court of reference power to consider the whole of the evidence and to give a decision.

18251. Then you would give them judicial power to convict?—Quite so, my lord.

18252. That is establishing a judicial tribunal *pro hac vice*?—Yes, I suppose it would be.

18253. They would have to have counsel before them and they would want some legal knowledge?—I agree.

18254. (*Dr. G. S. Buchanan.*) If your court, apart from any judicial power to convict, had established the principle as regards brandy, probably these appeals and this miscarriage of justice as you regard it would not have been necessary?—No, probably they would not.

18255. (*Chairman.*) But still human error is human error. You must either have a court or not. I understood you to say you would have a court?—I am not a legal expert, so I am not prepared to say much on legal points. I may make it plain in this way: My idea and the idea of those who originally suggested the court of reference—and I believe I had a good deal to do with it at the time—was that such a court would be very much the same thing in effect as the Court of Assessors with regard to shipping questions.

18256. We have had suggestions as to that, and it is a very substantial matter to consider. There are assessors in Admiralty cases and in patent cases?—Yes.

18257. That is a different phase of your view?—Yes.

18258. (*Dr. G. S. Buchanan.*) Another similar tribunal is the tribunal of appeal under the London Building Act. Do you know anything about that?—No.

18259. It is a different kind of court to the court you refer to?—Yes, I believe so.

(Adjourned for a short time).

18260. (*Chairman.*) Have you concluded all you have to say on the point we were upon when we adjourned?—This is a very wide subject, and one might be led into all sorts of lengthy statements which I have no desire to make unless, of course, the Commission require any information which it may be thought I am able to supply upon other points.

18261. Will you finish what you were going to say?—I was going to point out one thing—I do not know whether it has been mentioned to the Commission—and that is the practical difficulty there is in public analysts examining samples of brandy under the Acts in view of the fact that a comparatively large quantity is required for analysis. The local authorities have an idea that analyses of all kinds can be made with very small quantities. As regards brandy there is an important practical difficulty in the way, namely, that when an inspector goes into a public house to take a sample of brandy, and asks for a quart of brandy, suspicion is immediately aroused. It is immediately supposed that he wants it for the purpose of analysis, and a special thing may be given to him. It is quite impossible to carry out a full analysis of brandy under the Food and Drugs Act unless a quart of brandy is taken in order to allow of the division into three parts, except in rare cases. A quart is rather over a litre in amount. It is about 1·1364 litres, and therefore contains slightly over 1,136 cubic centimetres of liquid. Taking a quart and dividing it into three yields the lowest amount on which a proper analysis of brandy can be carried out, so that there is a practical difficulty there. A similar difficulty arises with several other articles taken under the Food and Drugs Acts.

18262. What do you suggest?—I think that if it were possible power ought to be given to inspectors to take and to pay for any quantity that is required for the purposes of analysis under the Acts. At present they can only do the thing in a sort of detective manner, and suspicions are aroused if they ask for unusual quantities. I think it ought to be possible for an inspector to go into a place and demand and receive the minimum that is required for the division into three parts so that the public analyst may have enough. If he does not get the third of a quart in the case of brandy a sufficiently full analysis is not possible—particularly in cases of suspicion or actual adulteration.

18263. Do you say that he should state who he is?—Yes.

18264. Would not that put the publican on the alert?—He can do it as it is constantly done now by means of deputies. A deputy goes in and asks for so-and-so, and the inspector comes in and completes the matter. He sends in a woman or a boy.

18265. (*Dr. G. S. Buchanan.*) If a woman or a boy asked for as much as a quart probably suspicions would be aroused in just the same way after the thing had been done two or three times?—To meet that I would suggest that the inspector should have the power of taking the quantity required—that he should have the power of legally seizing the amount required, assuming that there is a sufficient amount in the place.

18266. To be effective they must seize or take the quantity required from some bottles or vessels which are labelled?—Quite so; they must really have, in fact, the power of inspection.

18267. (*Chairman.*) It is very complicated?—It is a difficult thing to do, I admit.

18268. (*Dr. G. S. Buchanan.*) To be effective there must be already existing in the form of a label, or statement, or notice, or something of that kind what the publican sells that spirit as?—Either that or else there should be the power to go to the publican and say: "You are drawing brandy from this tap and I want a quart of it."

18269. (*Chairman.*) Over the counter?—Yes. The condition precedent to any prosecution under the Food and Drugs Acts is an accurate certificate from the public analyst. That certificate must be correct, and therefore he must have enough of the sample to carry out not only one analysis but a confirmatory analysis. No public analyst ought ever to issue a certificate in a case of adulteration unless he has confirmed his results, and in order to do that he wants the minimum sufficient for two full analyses so far as the full analyses can practicably be carried out. Under existing conditions the object of the authority in putting the law in motion may be defeated on account of the fact that unusual quantities are necessary. I do not know whether it is practicable to apply the suggestions I have made, but at present I see no reason why they should not be applied.

18270. (*Dr. G. S. Buchanan.*) You have told us you consider that the test that you employ as applied to these samples can, at all events in a considerable proportion of cases, distinguish British brandy, or brandies which are prepared by the addition of essences, in imitation of brandy, from what is real brandy. I think you consider that could be done?—Within certain limits. Starting with plain spirit it is quite possible to cleverly make up a mixture which will answer all the analytical tests at present capable of application. In such a case, even if you are morally convinced that you are dealing with a factitious article, you are not able to certify it as adulterated under the Food and Drugs Act if you have more than your 80 esters, and more than your 300 higher alcohols, and other bye-products agreeing with those figures. But there is no reason why, because you cannot say that such preparations, when cleverly made, are factitious, that you should not deal with the British and other so-called brandies which do not contain the essences or bye-products

peculiar to brandy, either added or natural, or which do not contain these in adequate amounts.

18271. It comes to this, that when you can in some cases determine that the brandy is clearly not the product of distillation of wine it is desirable in your opinion to take action to prevent that being sold as brandy?—Certainly.

18272. And you think that you can prove that in the case of pronouncedly low esters and so on?—Yes, within fairly wide limits it can be done.

18273. You are public analyst for a large number of districts?—Yes.

18274. Have you advised all your authorities to the effect that it is desirable to test brandies to ascertain whether they are genuine, to the extent that you can make out that they are genuine?—A public analyst does not, necessarily, of his own motion advise his authority; it is not always desirable, but if he is asked to do so, of course, he advises. Where the matter has been referred to me I have advised that it is desirable that the sale of these factitious brandies should, as far as possible, be stopped.

18275. They have taken action in that sense in Kensington, I think?—Yes.

18276. In any other of your districts?—Yes, in Lincolnshire the Kesteven County Council and the Holland County Council have had some cases, and there have been cases in Westminster also.

18277. (*Chairman.*) Who sets the proceedings first in motion? Is it done by somebody who thinks he has been injured, or by an officer who goes round investigating?—Where the Acts are applied to any extent it is done generally in London and large boroughs by the Public Health Committee. The Committee, or the Chairman of the Committee in consultation with the town clerk, and in some cases with the public analyst, decide what samples are to be taken during a quarter, and then it is left to the inspector or inspectors by arrangement with the public analyst to take those samples for analysis wherever the inspector chooses to take them. In some other cases an official, that is to say, the town clerk, or the medical officer of health, directs the inspector where he is to go to. That however is comparatively rarely done, because legally the inspector has the power to go where he likes to take samples; but as a rule it is done under the direction of the committee. In Lincolnshire the application of the Acts is under the direction of the chief constable, and is carried out by the police; the chief constable or the police superintendents or inspectors decide what is to be taken, and where the samples are to be taken.

18278. (*Dr. G. S. Buchanan.*) And without any advice from the public analyst?—As a rule, without such advice, but not always.

18279. Or knowledge of the public analyst?—As a rule, without his having such knowledge.

18280. In the case of some districts for which you are public analyst, Battersea for example, no action has been taken?—No, not for a long time in regard to brandy.*

18281. No action has been taken for a very long time in regard to this particular brandy question?—In regard to the brandy question not for a long time. I do not think we have ever had a case of adulteration of brandy with plain spirit in Battersea.*

18282. Would you report any brandy samples in Battersea as not being genuine if you found that they were like British brandy?—Yes, I certainly should. If it were decided by the borough council or by the committee to take samples of brandy I should be informed of the fact, I should ask for what I wanted, and I should say, "I want a third of a quart." I should then proceed to analyse not only for strength, but I should also analyse to ascertain as far as possible whether spirit other than grape spirit was present or not.

18283. In speaking about the analyses that you had made of genuine brandies you say you were satisfied of those brandies being genuine, because they were high priced. Do you think that price is always a satisfactory index?—I do not quite mean that to be taken as a criterion. I mean brandies of known character which you can go out and obtain in the market. For instance, when I had to deal with the Kensington Appeal case I went to various places in the district and bought certain samples of brandy, at a reasonable price, of course; some of the well-known brandies, such as Hennessy's and Martell's and some other less known brands of Cognac brandy, and also some Australian and Spanish brandies, with a view of ascertaining whether the analytical figures that have been referred to were characteristic of these brandies, and I may say that I never found a brandy which yielded a substantially lower figure than 80 as far as esters are concerned. When I say that, I refer to brandies generally regarded in the trade as being genuine, and as to the genuineness of which the vendors appeared to have no reasons to entertain any doubt.

18284. Some of these imitation brandies, as I may call them, I suppose, are sometimes sold at a fairly high figure?—Yes, that is so, no doubt. Of course, the price is not a guarantee of genuineness.

18285. If the variations of price corresponded with the variations in quality always, I suppose there would not be very much necessity for some of the action that you are used to?—Quite so.

18286. (*Dr. Cushny.*) I suppose you merely give those medical opinions as a piece of common knowledge?—Entirely. I am not giving a medical opinion really. I am giving a chemical opinion. I refer to the bye-products present in brandy, and to the fact that in the absence of those bye-products the article is different, and is merely plain spirit. It is therefore reasonable to conclude that the well-known medicinal effects attributed to brandy are due to the bye-products.

18287. Have you any authority for saying that plain spirit would not give the same medicinal effects?—The only real authority I can give is my personal experience. I have found that brandy will produce certain effects upon myself which no other spirit will produce. In cases of illness, according to my personal experience, you can take brandy when you cannot take whiskey or plain spirit.

18288. Of course, you recognise that it is a little dangerous to draw a general conclusion from a single case?—I quite agree. But my experience is in accordance with common knowledge. My point is that brandy is characterised by the presence of the bye-products. I do not assert that they produce a direct medicinal effect, but I say it is scientifically reasonable to conclude that the well-known medicinal effects of brandy are due to their presence.

18289. Do you think it is reasonable to draw that conclusion until it has been shown that the ordinary plain spirit has not that effect?—I think it would be an extremely difficult matter to prove that except by making a very large number of experiments, and, of course, those experiments, so far as I know, have not been made, but there is undoubtedly a general consensus of opinion that brandy is more easily accepted and tolerated by people who are dangerously ill, and to whom the administration of a stimulant which can be tolerated or retained may be a matter of life or death. As a chemist, I say that the well-known difference between brandy and plain spirit as regards medicinal value must be due directly or indirectly to the bye-products which are characteristic of brandy as compared with plain spirit.

18290. That is due to general opinion, and not that you have made any individual experiments?—No, I have made no experiments in that direction.*

* Questions 18280 and 18281.

One sample of brandy taken in Battersea was submitted on the 21st December, 1907, and two samples of brandy taken in the same district were submitted on the 20th December, 1905. These samples were found to have the composition of unadulterated brandies, and were the only samples of brandy submitted in Battersea between 1st April, 1905, and 1st April, 1909.

* The witness has subsequently written:—

"Experiments of this kind would have to be carried out by medical and chemical experts acting together and conclusions of any scientific value could only be drawn from such experiments if these had been carried out on a very extensive and elaborate scale. Owing to the nature of the experiments required, moreover, the results would probably not be decisive, and the witness considers that it is safer to accept the general consensus of opinion of the medical profession on this matter than to endeavour to draw conclusions from a necessarily restricted experimental investigation."

The witness withdrew.

Dr. J. T. Wilson.

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Dr. JOHN T. WILSON, called.

18291. (*Dr. G. S. Buchanan.*) You are medical officer of health of the County of Lanark, are you not?—Yes.

18292. The administration of the Sale of Food and Drugs Act in the three sanitary districts of the County of Lanark, and also of the burghs of Wishaw and Biggar is delegated by the county council to their public health committee?—Yes.

18293. Those are sanitary areas which have a total population of nearly 320,000, have they not?—Yes.

18294. The duty of obtaining samples of food and drugs at the cost of the local authority under those Acts rests, I think, with you, as the matter is arranged in the county?—Yes, we have express instructions granted by the respective authorities to do so.

18295. And the prosecutions, therefore, with regard to contraventions of the Sale of Food and Drugs Acts would be taken out in your name?—Yes.

18296. I suppose that would be after the complaints had been considered by the county clerk who would decide on the evidence as to whether a prosecution is to be instituted?—Yes. We lodge the information in detail with the county clerk, and he settles as to whether it is a suitable case in consultation with myself for taking into court.

18297. You include references to your proceedings under those Acts in your annual report?—I do.

18298. Can you tell us under what circumstances you began to pay attention to the question of brandy under the Sale of Food and Drugs Acts? Perhaps I should ask, in the first instance, whether I am correct in thinking that the first action by the local authorities under these Acts in dealing with imitation brandy —spurious brandy—was taken in your district?—Yes. I believe that the Lanark County Council was the first to take any action under the Sale of Food and Drugs Act relating to brandy, and it arose mainly, I think, on account of the report of the commissioner appointed by the "Lancet." I read that article very carefully, and then consulted with the public analyst, the late Dr. John Clark, whose son is now with me here to-day.

18299. Mr. Clark is your present public analyst?—Yes, he succeeded his father in the business and in the appointment. After discussing the matter very fully, we came to the conclusion that it would be desirable first of all to find out to what extent spurious or sophisticated brandy was in sale throughout the district. After having satisfied ourselves on that point, we then decided that it would be desirable to go into court with a case. The county clerk was consulted and the whole of the evidence most carefully weighed, and it was only after mature deliberation that the first case was taken into court.

18300. The first case that you took?—Yes.

18301. Could you tell us what the allegation was there and what the defence was, briefly?—Yes. There is an opinion frequently expressed that the liquor sold at refreshment stalls connected, say, with the cattle shows—a very common thing with us in Scotland—is of a very adulterated nature, and among the samples of brandy taken was one from a refreshment stall at a cattle show. The analysis showed that it was very far from being brandy as I understand it, that is to say, it was really a bad case. I might say I have a table here prepared with every case recorded in it. We have 81 of them altogether in the table, and there is information given. I refer in that table to this as a particular case.

18302. You hand in now a list which shows a series of 81 cases in all in which samples of brandy have been taken and reported on since 1902, when you began your inquiry into this matter?—Yes. (*See Appendix S.*) There is one case down there which is No. 4 on the list, which has 65 per cent. of spirit not derived from grapes. The price paid was looked upon as a large one, but you must remember that those purveyors pay a good sum of money for being allowed to purvey at a show of that kind, and therefore the ordinary price would be about one-half of what was paid for it there.

18303. Eight shillings a bottle was paid?—Yes, but probably it could have been bought outside for about half that amount.

18304. That was for a spirit which was reported by your analyst to be, approximately I presume, 65 per cent. of spirit not derived from the grape?—Yes. That case was very fully contested. There were expert witnesses called, two analysts, and a great number of traders. The case was very fully contested in the Sheriff Court at Hamilton, and his lordship's judgment is very well given in the special report on Brandy. It was also appealed on a case stated to the highest court of appeal in Scotland, the Court of Session, and the questions put in the stated case are three in number, which you will find there given. We had the decision in our favour. I will state what the questions in the stated case were. The questions were: Firstly, Are the proceedings competent? Secondly, Is the complaint relevant? And, thirdly, Do the facts proved warrant the conclusion? It would be necessary to go through a rather long statement, but I may say, for the sake of reference, that the special report that was issued to the County Council of Lanark Public Health Committee on brandy is available. Briefly put, the defendants maintained that it was absurd to talk of brandy as being the product of grape spirit, and his lordship refers to that: "The commercial witnesses testify that they are satisfied if the liquor looks, smells, and tastes like brandy, and they do not concern themselves with what it is made of. They candidly admitted, and indeed their counsel pressed it upon me in argument, that the brandy trade will be ruined in this country if the courts refuse to recognise as brandy any liquor which is not spirit of grapes. They contended that no matter what the origin of the spirit was—whether grapes, grain, rotten figs, potatoes or black ants—brandy it was if it was called brandy, and resembled brandy in taste, colour and smell." That was the position in which we found the trade when we took up the question; but I should say that when this case was reported in the newspapers we found that the trade did not support the views then put forward. Speaking generally, the trade at once took fright at this view of the brandy question, and many of the purveyors of brandy had their samples and stocks submitted to analysis and found that the same tests applied as the public analyst's, showing that the brandy was genuine brandy and that it was absurd to say that brandy as it was being sold could be made from almost anything.

18305. (*Chairman.*) This was before the sheriff?—Yes.

18306. It was a question of fact whether it was brandy or not? I suppose it was only on a point of law that it came within the jurisdiction of the Court of Session?—It was argued first in the Sheriff Court, and then on a case stated it went to the Court of Session.

18307. It was a criminal case and it was tried on a question of fact? So far as it was left to the question of fact it was for the sheriff and no one else?—Yes. Lord Traynor does say that he considered the sheriff was entitled to fix his own standard.

18308. In that case he had to construe the word brandy?—Yes. That was a very important indication given to us by the Court of Session that the sheriff was quite entitled in the absence of any legal standard to fix his own standard and uphold the certificate granted by the analyst.

18309. (*Dr. G. S. Buchanan.*) That original case was in 1903?—Yes, it was in 1903 that the purchase was made.

18310. Since that original case I take it you have included brandy systematically year by year in the samples which have been taken under the Sale of Food and Drugs Act?—Yes.

18311. And this table which you have handed in shows that a number of them have been reported on the figures obtained by the analyst as genuine, and others to contain various percentages of spirit not derived from grapes?—Yes.

18312. Upon just glancing at this table I notice that you put the prices paid per bottle in regard to these samples, and there does not appear to be any very striking difference between those which are genuine and those which are of doubtful purity?—That is so.

5s. per quart bottle is the more common price, there are some 6s., but none below 5s. We purchased a full bottle to begin with, but when we came to take what we call test samples we purchased a smaller quantity. When we purchase a test sample it is simply for the analyst's own purposes, and we make no division of the sample.

18313. That is for information?—Yes, that is for information.

18314. Are those test samples included in these?—Yes, they are.

18315. I see, for instance, that for No. 16 in 1904, which is apparently one of these adulterated brandies, 6s. a bottle was paid?—Yes.

18316. Then there is another one, No. 27, for which 8s. a bottle was paid. Was that at another of these fairs?—Yes, it was at another of those fairs.

18317. Would the same apply to No. 40?—Yes.

18318-9. That was also bought at one of these fairs?—Yes. Speaking generally, the samples were purchased at ordinary retail licensed premises.

18320. You have had other prosecutions?—Yes. It might be of interest to summarise the results year by year. For instance, we only had two samples at the end of 1902. During 1903 if you add those two you will find that there are 15 samples; nine were certified not to be genuine, and one of doubtful purity. This is the year of taking up this test case. The next year, 1904, we took 21 samples and 11 were certified to be not genuine, and that year there were six successful prosecutions. In 1905 22 samples were taken and only five were found to be not genuine. You see a great falling off in the number of adulterated samples. Three prosecutions were instituted, they all failed, and these would be of interest I believe in showing the difficulties in taking action under the Sale of Food and Drugs Acts. That had not anything to do with the success of our work, because during 1906 eight samples were taken which were almost all found genuine; in 1906 eight samples were taken and only one found not genuine; in 1907 11 samples were taken and all were found genuine; in 1908 four samples were taken and only one was found not genuine, but it was sold as cooking brandy and the inspector was told so. In the first two years more than half of the samples obtained and analysed were found not genuine, and during the last four years they were practically all genuine.

18321. You regard that very largely as the result of the actions that you took?—Yes.

18322. (*Chairman.*) What is your inference from that? Is your inference from that that they became more careful?—Yes, that the action taken under the Food and Drugs Act seemed to frighten the trade. I should say that in these later years many of the samples were test samples. I asked the inspector to go to places that he had not been to before and not go through the formality of dividing the sample, in other words, to try and take the samples as the outside public would—to just go in and ask for a small quantity of brandy sufficient for the purpose of the analysis.

18323. (*Dr. G. S. Buchanan.*) Can you tell me whether the analyst or you have considered whether the improvement that resulted in this was a genuine *bonâ fide* improvement or whether it simply meant that either in your district or generally they were adding ethers?—The answer I think is quite definite. I think Mr. Clark would tell you that there was only one instance where he had a reason to doubt the genuineness where he reported it genuine. Mr. Clark has been using all available means for forming an opinion of the genuineness, that is to say, he takes taste, smell and aroma, and in this one instance the ethers were high, and yet he was not satisfied that it was the genuine article.

18324. Ordinarily have these informal samples been checked by the expert taster?—No.

18325. Do you find that the plea that any spirit of this kind is entitled to the name of brandy is made now by the publicans?—No. In the last contested case where we had expert evidence, and where we failed, the view clearly put before the court was that brandy must be a grape spirit, but there was a conflict of evidence as to how you were to really determine the genuineness of the brandy. The analyst for the defence maintained that the amount of ethers or even total secondary products of itself was not sufficient evidence, and he had expert tasters there to say that they had also tasted the sample in court and they thought it genuine brandy.

18326. Can you say anything with regard to notices? Has one effect of your action been that publicans have put up notices saying that they cannot guarantee the brandy as the result of the production and the distillation of wine?—Our experience is that no such notices have been exhibited. In one instance where the inspector demanded a bottle of brandy he found that the shopman had written upon the label, "This is not guaranteed." Whenever the inspector intimated who he was the publican wrote that upon it. But there is no such thing as a public notice being posted up in the bars.

18327. That has not reached as far as Scotland?—No, it has not, and I hope it never will.

18328. Have you had the converse case of people putting up notices to say that their brandy is guaranteed?—That is a very common thing. I was quite struck with the frequency with which you get bottles that have upon the label such words as: "Guaranteed genuine grape spirit," and sometimes the certificate of analysis given by the analyst.

18329. Can you say that the action which has been taken in this way has excited great hostility among the publicans and traders generally?—No, quite the reverse. I think there is a strong feeling of sympathy with the work that we have undertaken by the great bulk of the traders in wines and brandies.

18330. You think there is a large, or at least a considerable proportion of the licensed spirit sellers who are willing or anxious to sell their products under a proper name?—Yes. Many of the retailers were evidently victimised themselves, and in many cases we did not undertake prosecutions or did not press for a conviction. Where it could be shown that they had actually bought the material from some importer of French brandy, and were buying it in the belief that it was genuine grape spirit, we did not prosecute or did not press for a conviction.

18331. It was invoiced to them as brandy, and they took it as genuine brandy?—Yes, and on learning that we broke off the prosecution. I should also have called attention to the fact that in three instances where the samples were taken into court the sample was referred to Somerset House, and in every instance the report from Somerset House confirmed our own analyst's certificate.

18332. Those would have been included, no doubt, in some of the cases that we were told about yesterday by Dr. Thorpe?—Yes, I expect so.

18333. Can you say whether in any way the beginning of this action of yours with regard to brandy was directly or indirectly initiated by particular branches of the trade that were interested?—That is absolutely not so. I took action, as I say, on my own responsibility with the county analyst, and the only difficulty we now have to contend with is the question of whether the analyst can always be safe in certifying that a particular sample is not genuine brandy. There is at least one analyst that we have to contend with who will maintain that really you cannot form an opinion as to whether it is genuine brandy or not.

18334. There is a good body of evidence on that point, I think, showing the difficulty. I suppose you would say that in these cases where you have taken action there was not much difficulty, owing to the very low figures?—Yes, that is so. I think Mr. Clark's figures always show that there is at least 30 to 40 per cent. of foreign spirit added. We have not taken action where there has been less than 30 per cent. foreign spirit added.

18335. (*Mr. Guillemard.*) I want to ask you a question with regard to what is the exact effect of this case on the history of the attempt to define brandy. What is the exact effect and authority of the opinion of the Appeal Court in Scotland? I have read the history of this case very often, and I constantly see it stated as if the Appeal Court in Scotland had added in some way to the authoritative decision of this question. But I think that this is not the case. I want to put some questions to you to bring it out. The point was this, was it not: A decision was come to by the sheriff?—Yes.

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18336. There was an appeal from the sheriff to the High Court?—Yes, there was an appeal from the sheriff to the High Court on a stated case which is peculiar to Scotland.

18337. I put it to you that this is all that the decision of the High Court amounted to, that it said that it was not competent for them to review the decision of the sheriff. Does it not roughly come to that?—That they found no reason to review it.

18338. Who was the judge who gave the main decision?—Lord Trayner.

18339. There were three questions put. The first question was, "Are the proceedings competent?" The second question was, "Is the complaint relevant?"—that is Scotch language, but I think it means in English law did the circumstances warrant the bringing of an action?—That is so.

18340. And the third question was, "Do the facts proved warrant the conviction?" The Court by a majority of two to one answered the second and third questions in the affirmative?—Yes.

18341. Therefore they said there was justification for bringing the complaint before the sheriff and the facts produced before the sheriff warranted him in convicting?—Yes.

18342. With that long preface I would like to know your opinion. Do you think that, as a matter of contributing to the authoritative decision of the question, the High Court carried the matter any further than the sheriff did?—I think it did in this respect that it showed the sheriff was justified in setting up a standard.

18343. In the absence of a legal standard?—Yes, in the absence of a legal standard. He had evidence and he seemed quite entitled to form a standard from the evidence laid before him.

18344. I have seen it stated in the comments on this question that the High Court had contributed towards the solution of the question of what is brandy. Will you say that they had?—Only in respect of this particular case.

18345. And even with regard to this particular case I see that one of the judges, Lord Moncrieff, said: "It is complained that the sheriff has made a standard of brandy for himself. I do not see how he could avoid that; he has taken the evidence of skilled witnesses and has come to a conclusion. It may be wrong, but we must take it as a matter of fact"?—Yes, that is so, so far as the High Court was concerned.

18346. Then the decision of the High Court in this case really only amounted to confirming the decision of the sheriff on one case?—That is so.

18347. (*Dr. Adeney.*) You are aware, of course, that the standard which you have adopted has not been accepted by the French Committee?—Not otherwise than just hearing it stated so.

18348. Perhaps you read an article by Dr. Thorpe entitled, "What is brandy?" that appeared some time ago?—No.

18349. However, you think the use of your standard has become sufficiently general as to maintain your decision so far?—Yes, I believe that is so. Mr. Clark is here and he can tell us.

18350. (*Mr. Robert M. Clark.*) It is borne out by our own experience. We have examined some hundreds of samples of brandy altogether.

18351. (*Dr. Adeney.*) Have you examined samples of brandy coming from different parts of France?

(*Mr. Robert M. Clark.*) On that point I should like to give you some particulars that I have here with regard to some of these brandies. "In most cases the wines distilled in a patent still are of low quality and disagreeable flavour. To get rid of the flavour the wine is distilled in such a manner as to produce a plain and silent spirit containing very little ethers and having no taste of brandy; such spirit is not saleable as brandy and it cannot be distinguished by analysis from the plain or silent spirit produced from grain, beet or potatoes. Although derived from fermented grape juice, this spirit is not brandy, and in my opinion it is not converted into brandy by the addition of a little brandy to flavour it. Apart from the smell, it has not the stimulating effect of brandy because it contains only a very minute quantity of ethers." That is really a very important point. "I have analysed two brandies of this kind manufactured by Cognac firms. The following were the results of my analysis:—

	Per 100,000 parts of Proof Spirit.		
	(1)		(2)
Ethers (as ethyl acetate) - -	15·00	...	10·75
Furfural - - - -	·30	...	·12
Free acid (as acetic) - - -	22·20	...	21·60

Regarding (1) the agent showed us the Government certificate stating that it consisted entirely of grape spirit and he explained to us that it was sold at 2s. per gallon free of duty. He stated it was made from a very low class wine and was rectified in a still similar to a Coffey still to take out the oils, etc."

18352. (*Dr. G. S. Buchanan.*) In the Cognac district?

(*Mr. Robert M. Clark.*) I cannot tell you.

18353. (*Dr. Adeney.*) Was it from someone dwelling in Cognac?

(*Mr. Robert M. Clark.*) Yes. "And that the grape spirit, which had little or no flavour, was mixed with a little brandy to flavour it. It was necessary to get rid of the bad flavour of the wine." The wine had to be distilled in this way to get rid of the flavour, and the brandy was afterwards added to render the spirit saleable. That was one firm, and another was the same. In (2) we were shown a letter from the Cognac firm to a firm in Scotland. In this letter it was also admitted that it was not a brandy distilled in the ordinary way but was redistilled and rectified owing to the strong smell of the growth of the wine, the object being to make it as plain and clean as possible."

18354-5. (*Dr. G. S. Buchanan.*) May I ask whether the origin of these samples is entirely clear? Have you got this from the agents?

(*Mr. Robert M. Clark.*) In this matter he showed us a letter from the firm who manufactured the brandy.

18356. (*Mr. Guillemard.*) Did he show you the certificate?

(*Mr. Robert M. Clark.*) In the previous one he showed us the Government certificate that it was pure grape spirit.

(*Witness.*) That is important on the definition of brandy, because, if you stop short of saying that it is to be a grape spirit, and everybody in our area is agreed that brandy should be a grape spirit—if you stop short of that and have no regard to distillation, then you may have a plain spirit derived from the grape.

18357. (*Dr. Adeney.*) The only question I should like to ask you, Dr. Wilson, is this: Is this a safe heading, "Percentage of spirit not derived from grapes?"

(*Mr. Robert M. Clark.*) In the first instance it was stated in that way. We were not aware at the time that grape spirit was made in a patent still, but latterly, after the first four or five cases, the samples were reported as containing plain spirit.

(*Witness.*) We have had difficulty with a certificate. We have been obliged, to meet the views of the various courts before whom we have gone, to alter the certificate three or four times. We have had to alter the form of certificate granted by the public analyst to meet the view of the different courts.

18358. (*Dr. Adeney.*) You have handed in a table giving particulars of analyses of rums?—Yes.

18359. What standard did you use there? First of all with regard to Jamaica rum?—I would rather not go into that very much. 400 parts of compound ethers were looked upon at the start as a proper quantity, but it was reduced later on in view of information that came to Mr. Clark.

18360. Did you take similar steps with regard to Demerara rum?—No, we never did. We have taken no action with regard to rum for the last series of samples, because we felt that there was some difficulty about it as to what the standard should be, and in view also of the action taken by the Jamaica Government authorities, but all the same the present position of the sale of Jamaica rum is very unsatisfactory.

18361. All this goes to show that it is desirable to have some authoritative pronouncement from some authoritative committee or central body?—Yes, it

is desirable to have some authoritative pronouncement from this Commission, and I should be very glad if there were no need to take action under the Food and Drugs Act at all. I think it is a great pity that there is any need to take action, and I hope the Commission will settle that point.

Dr. J. T. Wilson.

6 April 1909.

The witness withdrew.

Dr. Walter Noel Hartley, called.

Dr. W. N. Hartley.

18362. (*Mr. J. Y. Buchanan.*) You are a Doctor of Science?—Yes.

18363. And you are a Fellow of the Royal Society?—Yes.

18364. And a Fellow of King's College, London, and professor of chemistry in the Royal College of Science, Dublin?—I am.

18365. You are a Dean of Faculty also in Dublin?—Yes.

18366. In former years you were consulted by distillers and rectifiers on the subject of fermentation and distillation?—Yes.

18367. How long ago may that have been?—Some fifteen years ago.

18368. Were they distillers and rectifiers in Ireland?—Both in Ireland and England.

18369. You say you are aware that the blending of malt or grain whiskey has been practised for more than 25 years with materials of a varied character, but of a certain alcoholic strength?—Yes.

18370. What material have you in your mind?—Various kinds. It has been stated that the alcohol is the same in all spirits, and therefore mixing a blend spirit with any other distilled spirit, as, for instance, with Highland malt whiskey or with Irish whiskey or with French brandy does not impair its quality as a stimulant. This argument is based on the assumption that all blend spirits are pure ethylic alcohol, or so pure that only traces of the higher alcohols are contained in them.

18371. Have they been used to blend with pure malt whiskey?—I cannot say as to that. I do not know what particular whiskey the spirit was intended for mixing with.

18372. That is some time ago that that came under your notice?—Yes.

18373. You say in your *précis* that it is not the case that blending spirit which may be bought for blending is always of the same character. Have you in your mind the more or less fraudulent blending which might take place by a publican?—Yes.

18374. Is it a production of blends such as are sold openly in the market?—Yes.

18375. Have you in view what may be called fraudulent blending in a public-house, or a legitimate and open blending where whiskies are sold in bottles with labels?—I refer to bottled whiskey really.

18376. In whole bottles?—Yes, or blending in bond, which I believe was largely practised.

18377. But all this experience is of considerable date?—Yes.

18378. From your own observation you have ascertained that small quantities of foreign substances may be detected in what purports to be pure spirit. Will you tell us the nature of your observations and the character of the experimental work and the material differences?—Generally I have examined the spirit with a view to ascertain what are the substances that are present both in Highland Scotch whiskey and in what purports to be pure spirit, and in those cases where the so-called pure spirit was examined I found certain substances there to which I could not give any particular name or character. These were certainly not members of the alcoholic series, and I believe they were substances of a nitrogenous character. My impression was that they came from foul fermentations and these had been cheap varieties of spirit that might be used for blending, that these substances were present, and that they caused the bad flavour of certain kinds of whiskey. Experts have shown me that they could detect these impurities in spirits, although examining them by very simple means, even when I could not do so.

18379. You say even in absolute alcohol you have found some of these?—Yes.

18380. Have you any knowledge of what the absolute alcohol was prepared from?—No. It is a curious fact that there is only one case which I am aware of; I made special inquiry as to it, and it turns out that this alcohol was the purest I could get. It happened to have come from a distillery where spirit was made from spoilt grain, but it was the purest alcohol I could get.

18381. Is it not possible in this country to get absolute alcohol made from wine spirit?—I do not know whether it is or not, but I never could get it.

18382. Is the absolute alcohol that we get for our laboratories made according to your belief from grain spirit of this country or from Hamburg potato spirit?—I think what we use as a rule is from grain spirit, and even that has undergone a change within the last few years. It is far purer now than it ever was.

18383. Dr. Thorpe alluded to an analogous thing that he had noticed, and his idea was, without committing himself to great certainty, that it might be produced in the malting, or was due to the fuel that infected, as it were, the malt. Have you considered it from that point of view?—Yes. It was really for the purpose of ascertaining whether the aromatic products from the turf did not affect the malt and afterwards pass into the wash, and hence into the spirit by distillation. The substances that were in the pure spirit may have been of that character, but I do not think so. In the *précis* of Dr. Thorpe's evidence he mentioned pyridine, and pyridine I believe is a substance that I have found in absolute alcohol; though I never could definitely prove it, because in order to do so necessitated working on so large an amount of material that the experiment was prohibitory.

18384. Was your method spectrographic?—Yes.

18385. By means of absorption spectra?—Yes.

18386. And that is capable of detecting very very small quantities?—Yes; for instance, of pyridine.

18387. Have the researches been published?—To tell you the truth I did not publish them fully for a very good reason. I anticipated that if I published details, some of these aromatic substances which I had detected in whiskey might occasion them being added to give it a flavour, that is to say, they might be added by those who wished to give an extra flavour to their whiskey.

18388. Dr. Thorpe indicated to us that he was of the view that those pyridine and piccoline bodies had a great deal to do with distinctive taste, because I think he stated distinctly that he did not attach much importance to the higher alcohols or esters, but that these things which are in very minute quantity he thought had more to do with the character than anything else. Is that your view?—No, I do not think that I could endorse that, but certainly I am of opinion that it is the pyridine, or some such base as that, which has constantly eluded one's attempts to isolate it because it distils over with the spirit, and what is supposed to be pure spirit is not pure spirit. The quantity that can be detected by the spectrograph is so small that the purest ammonia that you can buy always contains a small portion of pyridine.

18389. Do you deny the fact that these pyridine bodies have an important bearing on the taste or flavour of the potable spirit?—No, I should think they have; but what I attribute the distinctive flavour of Scotch whiskey to is more the other volatile aromatic principles in the products from the peat moss.

18390. Would it be the combustion which would give it some of those pyridine bodies?—I should say so, certainly.

18391. So that in point of fact these would have a considerable bearing on the flavour?—I should think they would.

Dr. W. N Hartley.

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18392. There was another fact that Dr. Thorpe brought out in connection with the sophistication of the potable spirit with methylated spirit with these bodies. He stated the opinion that it had a great deal to do with the nauseous character of methylated spirit, and that their disappearance by degrees was the reason why methylated spirit when kept a certain time was not so distasteful to persons who wished to drink it. Would you endorse that view?—I think so, certainly.

18393. And that would be in a measure applicable to a whiskey, which contains it, to begin with, in much smaller quantities?—Yes.

18394. Could you give us a reference to any observations that you have made, or to anything that you have published with regard to the method?—There is some reference in the Cantor lectures that I gave to the Society of Arts in 1888 on fermentation and distillation. I mentioned there the application of the spectroscope.

18395. And to the detection of these nitrogenous bases?—I did not mention them.

18396. Have you published anything about the application of the method to the detection of nitrogenous bases of that sort?—Only generally in connection with the spectroscope and the examination of the alkaloids; and in those cases pyridine is the basis of a good many of them.

18397. Could you give us the reference to them?—Yes. There is a Paper on the Absorption Spectra of the Alkaloids, Philosophical Transactions of the Royal Society, published in 1884, I think. Also a long series of papers in the Transactions of the Chemical Society.

18398. Dr. Adeney reminds me that Dr. Thorpe rather qualified the statement which I mentioned to you about the nitrogenous bases being in fact the only taste-giving ingredient of whiskey. He did not adhere to its being universal, but you think that it contributes to the taste of the whiskey materially?—Yes.

18399. Do you think it would disappear by keeping in a cask?—I cannot say, I should think it is very likely unless perhaps there was some acid present.

18400. Would it be likely from the hydrolysis of ethers to be submitted to the action of the acetic acid that would be formed?—I think not. I do not think the keeping in cask would affect it.

18401. At any rate it is a very fine ingredient to determine it. It would require, as you say, investigations on a very large scale?—Yes.

18402. (*Dr. Adeney.*) I suppose you agree that some of the esters at least would be strongly flavoured constituents, for instance, amylic acetate would be a strongly flavoured body if present?—Yes.

18403. And amylic acetate is present in whiskey, is it not?—I do not think I have come across it in whiskey.

18404. Have you ever noticed the odour?—I have examined several Highland whiskies and I have not found amylic acetate.

18405. What is the constituent which gives that peculiar pear-drop odour to so many of the Highland whiskies?—I do not know. I do not get it in the whiskey I have in Dublin.

18406. You have never noticed that odour?—No.

18407. Some of the Scotch distillers informed us last year that it was an odour and taste that they were very anxious to produce, and they did not know the conditions for its certain production. You have no information on that?—No. I cannot say that I have actually found it in frequent distillations of Scotch whiskey.

18408. Of course, it is quite possible it may be present?—Quite so, certainly.

18409. As to flavouring materials, it is quite possible they are at present in very minute quantities and are not among the constituents ordinarily determined by the analyst?—Yes, particularly those of the aromatic class.

18410. (*Dr. Cushny.*) Part of the Reference to the Commission is in regard to health. I should like to know the basis for your statement that there can be little doubt but that these secondary products are not always of an innocuous character in these whiskies. Have you any evidence as to that, or is it merely an impression?—It is more an impression, I should say, than otherwise. It is a general consensus of opinion, I think.

18411. I have been seeking ever since the beginning of this work for some basis for that consensus of opinion, but I have not found any?—That may be.

18412. Here you say again that certain blended spirits sold as whiskey produce unpleasant effects which are not those characteristic of pure alcohol?—Yes, that is so.

18413. Or of brandy, or of properly made whiskey?—Yes.

18414. You say that it is a matter of common observation?—Yes.

18415. Can you give us anything in support of that, or is it merely an impression?—I have tasted two different spirits from time to time, and one of them has produced a certain effect of nausea, and the pure alcohol does not.

18416. What sort of whiskey was that?—It was not whiskey, but it was plain spirit.

18417. Was it a certain blended spirit sold as whiskey?—No, it was not; it was sold as pure spirit.

18418. You say that certain blended spirits sold as whiskey produced unpleasant effects?—Yes, there I referred to the mixing of what is supposed to be plain spirit with what is said to be pure spirit.

18419. What is your basis? What evidence have you that this substance sold as whiskey produced unpleasant effects?—My personal experience has been that it produces unpleasant effects.

18420. This whiskey?—Yes. Besides, as I say, I have tried the effect of a certain kind of spirit which was said to be pure spirit, and I found unpleasant effects from that, but I have also experienced bad effects from certain blends of whiskey.

18421. You have been able to distinguish an injurious form of whiskey?—Yes, certainly, it is a long time ago—it was some 15 years ago.

18422. Dr. Thorpe repeated several times that his experience was that no one form of whiskey was worse than another, and that has been frequently stated?—I think it is extremely likely that at the present time the blending is a blending with very much better spirit than it was formerly.

18423. You associate that with the plain spirit?—Yes. I do not like to mention any names, but whenever I saw this particular whiskey I never would touch it. My experience was by no means pleasant.

18424. We have had the statement before that the blending of patent still whiskey was injurious, but much more frequently one hears that the pot still whiskey is the injurious one?—I should not say that. Such whiskey as I have drunk as a rule has been pure pot still whiskey, that is to say, it is what I have always in my own house, and this blended whiskey from which I have experienced bad effects had a very large sale all over Wales, and over England, too.

18425. You have not met that recently?—I cannot say. I have never asked for it.

The witness withdrew.

Adjourned.

THIRTY-SEVENTH DAY,

Monday, 17th May, 1909.

At the Westminster Palace Hotel.

PRESENT :

THE RIGHT HON. LORD JAMES OF HEREFORD, G.C.V.O. (*Chairman*).

L. N. GUILLEMARD, Esq., C.B.
W. E. ADENEY, Esq., D.Sc., F.I.C.
J. R. BRADFORD, Esq., M.D., D.S., F.R.S.
G. S. BUCHANAN, Esq., M.D.
J. Y. BUCHANAN, Esq., M.A., F.R.S.
A. R. CUSHNY, Esq., M.D., F.R.S.
A. V. SYMONDS, Esq., (*Secretary*).

Mr. ARTHUR JOHN TEDDER, re-called.

Mr. A. J. Tedder.

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18426. (*Mr. Guillemard.*) What is your position?—Chief inspector of Excise.

18427. You gave evidence, I think, on the first day of the sitting of the Commission?—I did.

18428. The object in again calling you to-day is partly that you may give information to the Commission on certain points that have occurred to them that want some elucidation, and, in the second place, to give you an opportunity of volunteering evidence, if you wish to do so, on any point that you have noticed in the evidence given by other people. Perhaps you had better begin by handing in the various memoranda that have been prepared in compliance with the wish of the Commission on various points?—Shall I mention them as I hand them in?

18429. If you will hand them in the Secretary will give the names afterwards. (*Handed in. See Appendix T.*) I do not think I have any questions to ask you, but will leave that to the other Commissioners.

18430. (*Chairman.*) Will you please state generally the nature of the papers you have handed in and in what direction they point?—The first paper is with regard to the law and practice of the Board of Customs in connection with the importation of brandy, rum, Geneva, and unenumerated spirits.

18431. (*Mr. Guillemard.*) Imported spirits generally?—Yes. The second document is a paper on the Merchandise Marks Act, giving the procedure of the Customs in connection with it. The next one discusses the powers and duties of a Revenue Board in connection with potable spirits. The next is a history of Section 69 of the Spirits Act, 1880. Then the next is a note on the mixing of British and foreign spirits in bond. Then I have an account of the early use of the patent stills by distillers in the United Kingdom. Then there is a list of the distillers having patent stills in each year from 1827 to 1860, showing the growth of the use of the patent still.

18432. (*Chairman.*) Why stop there?—I have not gone any further because since then the numbers have been practically the same. The next document I hand in is a return of the quantity of spirit made from each description of materials in pot stills, and pot and patent stills in England, Scotland, and Ireland respectively, prepared from the annual distillery returns furnished to the Board of Inland Revenue.

18433. Have you an analysis of the material, of which maize is an important matter? Does that differentiate between all spirits or all British spirits? Does it include British brandy?—We have not any account of the maize as maize; it is included in the grain column.

18434. We cannot help that. There is no distinct definition of the use of maize as distinguished from the others?—No. This information begins with the year 1827, when the first returns were made.

18435. Are you under the impression that this would form interesting reading to the Commissioners?—I think so. Certainly it will be for the people interested.

18436. That will include us I hope? We are obliged to you. These papers will be of great use to us.

18437. (*Dr. G. S. Buchanan.*) I have merely one or two questions to ask you on points of detail rather apart from these very useful and valuable papers you have handed in. We have had some evidence lately with regard to brandy and unenumerated unsweetened foreign spirits, which may apparently be mixed with brandy or represented as brandy. I wish to be clear as to what happens to those spirits when they come in. Do they go into bond for any length of time in this country when they come in?—Which? The brandy, do you mean?

18438. What goes under the name of unenumerated sweetened foreign spirits?—It goes into bond, but I should imagine, as a rule, it does not stop very long in bond, but I cannot tell you.

18439. In bond it must not be mixed with British spirits, but it can, of course, be mixed with other foreign spirits?—Not with brandy.

18440. Then have you any general knowledge as to where those spirits go? I suppose they would include Hamburg brandy, and things of that sort, would they not? Have you any knowledge as to where or how they are distributed?—No, I have not.

18441. If they are despatched about the country how would they be invoiced, or how would they be named in the permits?—If they came in as brandy they would still retain that name.

18442. But if classified as unenumerated?—They would go out as unenumerated on the permit.

18443. Will you tell us how you generally describe what are included in unenumerated spirits?—The enumerated spirits are brandy, rum and some few others.

18444. The unenumerated include, for instance, grain spirit made abroad?—Yes.

18445. Or potato spirit made abroad?—Yes.

18446. (*Chairman.*) Is Geneva enumerated?—Yes, it is, my lord.

18447. (*Dr. G. S. Buchanan.*) Would they, going about the country with permits, always be differentiated as unenumerated?—Not after they passed from the bond to duty-paid stock.

18448. When taken from the duty-paid stock how would the man describe them when he asked for a permit?—When he makes out his own certificate?

18449. Yes?—I really could not say. Probably just "foreign spirits."

18450. A mixture of those out of bond he might call brandy?—Yes, we would have no control over him.

18451. I did not quite understand about British brandy. Some of the witnesses gave us evidence that British brandy had to be marked "B.B." Is that in consequence of an Excise requirement?—No, it is not "B.B." We should call it "British compound."

18452. (*Chairman.*) Is it not marked "B.B."?—They do frequently describe it as "B.B." We do not object to that.

18453. (*Dr. G. S. Buchanan.*) It is not an Excise term?—No.

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18454. (*Chairman.*) Who do it?—The dealers in sending out.

18455. Personal action?—Yes.

18456. (*Dr. G. S. Buchanan.*) Can a man who makes British brandy send it out and describe it merely as brandy with your assent or without your objecting?—We really do not come in, you see. I should call it an improper description.

18457. (*Mr. Guillemard.*) Is there a large trade in British brandy?—Yes, a great deal of British brandy is made.

18458. (*Chairman.*) Does the State or any department interfere in any way in putting the marks on?—No.

18459. (*Dr. G. S. Buchanan.*) They do not as regards British brandy?—No.

18460. They do, of course, as regards the labelling of brandy, rum and the enumerated spirits?—Yes, in bond.

18461. In this memorandum about section 69 of the Spirits Act, you refer to rectifiers who avail themselves of a privilege which was granted to them in the case of spirits intended for export, to mix certain ingredients in bond. You say "rectifiers at present avail themselves of this section, that is section 69, carrying on in fact a kind of compounding in bond, and to take away this privilege would undoubtedly be considered a hardship by certain members of the trade." Are the ingredients which are permitted to be mixed in bond stated in any way?—The Act says: "Any other ingredient." The Act allows them to add any ingredient.

18462. A case was mentioned to us by Mr. Bramall the other day, and he said that from the same vat spirit was being bottled and sent out labelled "Irish whiskey" on one side, and "Scotch whiskey" on the other. I think the general position of the Excise with regard to those descriptions has been fully stated, and I do not wish to trouble you with that, but I should like to ask you whether you have any knowledge, or whether it has been reported to you, that this kind of thing is done?—I have heard of cases. I think the probability is that there was some little alteration made in the spirits by colouring, by which means they differentiated between the Irish and the Scotch.

18463. The darker colour would be Irish and the lighter colour Scotch?—Yes, something of that kind.

18464. The difference being only in colour?—Probably.

18465. (*Dr. Adeney.*) Can you give us any information as to changes in materials or apparatus employed since you last gave evidence before us?—During the past year there have been two or three rather interesting changes. For instance, for the first time, some alcohol has been made from wood in this country, not a very large quantity, and none of it was disposed of for potable purposes. Then I came across a case of a Scotch pot distillery using sugar combined with their malt, which is rather interesting, and another Scotch pot distillery using maize for the first time.

18466. Do you know if either of those whiskies were prepared for the purpose of blending with patent still or for consumption as self-whiskies?—Probably for either purpose. I had samples of them examined at the Government Laboratory. The spirit was made in part from sugar, but the proportion of sugar was not large.

18467. Can you give us the proportion?—About 5 per cent. That spirit contained a much larger proportion of esters or compound ethers than the other, and it was suggested that that would be due to the use of the sugar. Would you like the figures?

18468. If you can give us those figures it would be interesting?—Shall I read them out?

18469. Will you give them to us afterwards?—Yes. Otherwise there was nothing to distinguish the spirit from an ordinary pot still whiskey.

18470. You mean in flavour?—Yes; in neither of these cases.

18471. With regard to the use of wood, I take it that was not in connection with a mash with malt?—No, entirely alone.

18472. Have you any further information to give the Commission?—I think some of the members of the Commission saw the continuous still which was being used in the North. It is rather curious that it appears to be very much like the first Saintmarc still.

18473. (*Dr. G. S. Buchanan.*) The original patent still?—Yes, the same idea. Then, in addition to that, there have been some experiments with the amylo process, but that process can scarcely be carried on in this country unless there is an alteration of the law.

18474. (*Dr. Adeney.*) Have you had any experience as regards the flavour of the spirit produced by that process?—No. Of course, it is a very strong spirit which is made; it is practically flavourless.

18475. Have you noticed any special flavour?—No, I could not say anything about it.

18476. Then, with regard to the product of the continuous still, have you had any analysis made of that?—Yes, I have had an analysis made of that.

18477. Could you also give us the return of that?—I think I can get it.

18478. It would be interesting if you could. I do not know whether any of the papers you have handed in cover the arrangements between the Customs and the Board of Agriculture under the Sale of Food and Drugs Acts of 1899 and 1907 with regard to margarine and so on?—I do not think I have handed that in, but I will do so. (*Same handed to the Commission.*)

18479. (*Dr. Cushny.*) I wish to ask you a question about this wood alcohol. Would the Excise permit it to be used as potable spirit?—We could not prevent it going out as potable spirit, but if it contained any methyl alcohol we should very likely come across the seller of it afterwards. If we found any trace of methyl alcohol in it we should proceed against him under a certain section of the Spirits Act.

18480. There is protection for the public against that?—Yes.

18481. (*Dr. Bradford.*) There is a question I desire to put to you with regard to the amylo process. You said that could not be carried out here at present without an alteration of the law. Would you mind explaining that?—The reason for that is that the specific gravity of the worts cannot be ascertained by the prescribed saccharometer, which is a necessity under the Spirits Act.

18482. (*Mr. Guillemard.*) Once or twice in the evidence there has been mentioned the practice that existed at one time of keeping distinct accounts of spirits made from malt. Could you tell the Commission when that practice was carried on and what the reason for it was and why it was given up?—The reason for it was that the malt which was used in Scotland and Ireland at this time was duty-paid.

18483. How long ago was this?—An allowance in the nature of a drawback on the malt used was made in 1823 and went on until 1855. It was done to encourage the use of malt; it was really to get rid of the smuggler, who in those early days was doing more of the distillation of spirits than the legal distiller. It was necessary to keep a strict account of the spirits made from malt because in England there was no drawback on malt. They had to work with duty-paid malt, so that with regard to any spirits going from Scotland or Ireland to England the rebate or drawback had to be repaid upon it, in order that the English distiller should not be placed at a disadvantage.

18484. That account was kept in the interests of the Revenue?—Yes, entirely.

18485. When did the practice pass away?—In 1855 there was an Act passed allowing the making of malt duty-free for distillation, and then, of course, there was no more necessity for keeping up this.

18486. (*Chairman.*) When was the malt tax repealed?—In 1880. In 1855, therefore, we dropped the description of these spirits as malt spirits, but some of the distillers complained that this interfered very much with their business, and although the Revenue authorities were much against it, the Treasury decided a few years later that distillers who worked with malt only should be called "malt distillers," and be so described on the permits sent out with spirits.

18487. (*Mr. Guillemard.*) Why were the Revenue authorities against it?—Because they felt that they had no real control over what they were certifying.

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18488. You mean that they did not like their officers certifying that it was made from malt unless they knew that it was made from malt?—Exactly. That went on for a few years, until 1864, I think it was, and then it was found that there was a considerable amount of abuse in connection with it, that the spirit very often was altered in transit, and the privilege was withdrawn.

18489. You mean that it got into consumption described as "malt distilled" when it was not?—Yes.

18490. Is that the last that was heard of it? It has never been revived since?—Never since.

18491. (*Chairman.*) You spoke of labelling taking place in bond?—Yes.

18492. What is labelled, the casks or the bottles?—The bottles.

18493. Who labels them?—The trader.

18494. Are there two sets of appointed warehouses, the Excise and Customs, or are they all one?—They are all the same.

18495. Do the officers exercise any control over the labelling?—Perhaps I had better read from the code exactly what their instructions are with regard to the labels: "Officers are not to interfere with labels or names used on bottles or cases filled or made up in bond, beyond seeing that no label or inscription contains such expresions as "bottled in bond," "bottled in Customs or Excise warehouse," or any other indication implying official countenance or guarantee of correctness of the statements made."

18496. I suppose in consequence of that they do not exercise any supervision?—They do not as a general rule.

18497. They let the trader do as he likes?—Practically so.

18498. I suppose this is a matter for the convenience of the trader to put upon the bottle the information he wishes to convey to his customer?—Exactly.

18499. And that is all?—That is all. I may say that, in spite of this general direction officers do sometimes raise questions as to labels. If the Board found, for instance, that a man was labelling spirits 20 years old, when the officers knew from the transaction which was going on in the warehouse that the spirit was not 20 years old, the Board would interfere and have interfered in cases of that sort.

18500. I suppose on the ground of public morality you would—it is a fraud?—Yes.

18501. I presume that would be the duty of every man to his neighbour if he saw a fraud being committed to try and stop it. That was your object, I suppose?—Yes.

18502. (*Dr. G. S. Buchanan.*) Do you do that under the general powers of your Department, or would you rely rather on the Merchandise Marks Act?—Under the general powers of the Department, but we should probably tell him that he might be proceeded against under that Act.

18503. We have had some evidence with regard to the flavouring materials employed by compounders of spirits, or, rather, there has been an absence of evidence as to these flavouring materials?—Yes.

18504. Could you tell us anything about the knowledge that comes to your department on the subject of the things they do use?—I am afraid no knowledge comes to us. It is the practice of the trade to keep the knowledge from us, not because they are afraid of us knowing what is being used, but because they do not wish there to be any possibility that their particular methods of making up their compounds should be known to their rivals in trade.

18505. They say even to the Excise what the compounders say to us, that short of an Act of Parliament they would refuse to give the information?—They very likely would say that.

(*Chairman.*) We are obliged to you. We shall use your papers to the fullest extent, for they are exactly what we wanted to have.

The witness withdrew.

Dr. G. S. Buchanan.

Dr. G. S. Buchanan, called.

18506. (*Chairman.*) Dr. Buchanan, I understand there are some papers you desire to put before the Commission?—Yes.

18507. Will you state, first of all, your connection with the Local Government Board?—I am acting at present as Chief Inspector of Foods at the Local Government Board. I will hand in to the Commission this memorandum which relates to certain matters which have been referred to in the course of the Commission's inquiry, for example, with reference to the Sale of Food and Drugs Acts and their administration, and the action taken by the Local Government Board in regard to those Acts; the question of official limits and descriptions under those Acts, and otherwise, as applied to foods; and some notes as to foreign and colonial food laws. There are two appendices to the memorandum, one with regard to certain definitions of foods which have been made in foreign countries, and the other with regard to the administrative action taken as to whiskies in the United States. I will hand those in, and shall be pleased to amplify them in any way. (*See Appendix U.*)

18508. (*Chairman*). We are greatly obliged to you.

The witness withdrew.

(*Chairman.*) I have to state that the evidence which the Commission was appointed to take is now concluded, and there are no more witnesses to be called. The Commission has sat for 37 days, and has examined 116 witnesses, from whom we hope we have obtained sufficient information to enable us to make a correct report. It therefore only remains now for the Commission to consider its report and to present it to the King. It would be unbecoming on my part to say when that report will be presented, but I may say that we have a considerable amount of matter to consider, and every effort will be made to present our report at the earliest opportunity.

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	1.	2.	3.	4.	5.	6.	7.
Acids as acetic acid	150·92	77·24	94·18	65·79	69·00	288·80	106·54
Aldehydes	73·37	73·32	60·54	109·64	95·29	19·25	51·55
Furfural	2·11	1·69	1·49	14·61	1·74	3·06	1·69
Ethers as Ethyl acetate	454·19	538·79	212·44	217·61	859·67	521·77	502·41

	8.	9.	10.	11.	12.	13.	14.
Acids as acetic acid	162·91	116·93	153·60	152·90	97·98	118·16	126·66
Aldehydes	7·33	7·97	4·00	5·57	6·41	10·12	4·02
Furfural	1·90	2·50	1·42	1·46	1·52	1·42	0·88
Ethers as Ethyl acetate	205·48	450·18	55·14	59·56	79·55	85·44	50·11

	15.	16.	17.	18.	19.	20.	21.
Acids as acetic acid	89·86	150·00	86·65	134·79	57·71	60·90	88·35
Aldehydes	2·40	5·20	8·82	10·96	5·66	4·45	11·96
Furfural	1·09	6·60	2·46	1·33	4·16	3·12	3·15
Ethers as Ethyl acetate	57·66	218·59	65·90	65·90	121·11	88·68	97·19

	22.	23.	24.	25.	26.	27.	28.
Acids as acetic acid	91·36	79·41	70·68	90·98	86·45	108·06	105·50
Aldehydes	12·16	6·84	15·74	8·40	27·37	28·57	3·35
Furfural	3·11	3·38	2·95	2·86	3·96	4·50	3·19
Ethers as Ethyl acetate	98·98	92·28	55·07	136·84	45·08	68·73	101·68

	29.	30.	31.	32.	33.	34.
Acids as acetic acid	105·98	149·06	100·42	149·38	108·57	88·09
Aldehydes	7·54	19·49	13·08	17·81	17·88	4·65
Furfural	3·34	3·37	2·04	3·38	2·67	2·09
Ethers as Ethyl acetate	180·09	150·78	88·73	157·15	49·28	238·09

APPENDIX K.

Handed in by Mr. FERGUSON.

EXTRACTS FROM RECOMMENDATIONS of the Australian Tariff Commission in their Report on Spirits and Distillation, 1906.

"(12) That the Excise duties should be differentiated according to:—(1) Materials of origin; (2) mode of distillation; (3) alcoholic strength; (4) the time during which distilled spirits are kept under Excise supervision for the purpose of ageing and maturing and for certification of quality. (13) That spirits distilled under strict Excise supervision and proved to be produced from superior and expensive materials, such as grape wine and barley malt, by approved methods of distillation, which guarantee them to be free from illegitimate manipulation and 'doctoring' and certified by a Commonwealth analyst to be pure and true, should be charged less Excise duty than spirits which do not comply with those conditions. (14) That beyond all reasonable doubt raw spirits are injurious, and they improve in quality and value by being allowed to age and mature before going into consumption. We approve of the principle of the Canadian and late Victorian laws that no spirits, whether imported or of local origin, should be allowed to be removed from Customs or Excise control until after the expiration of a sufficient time from distillation. Power should also be given to the Customs and Excise authorities to seize and denature spirits proved to be dangerous to health and unfit for consumption. (15) That the evidence is strongly in favour of the superiority of the pot still as a machine for the distillation of brandy, whiskey and rum; but, on the other hand, there is evidence that the patent still may be so worked and regulated as to produce the same alcoholic distillate as the pot still. In view of this conflict of opinion, we cannot undertake to say that preference should be given solely to pot still spirits, but we suggest that it be given to spirits the produce of the pot still or of any similar process yielding substantially the same results as the pot still. By this provision the product of the patent still will not be excluded from the preference which we are prepared to recommend. If so managed as to yield spirit of a low alcoholic strength retaining natural esters and characteristics, the patent still will not be disqualified. (16) That brandy and whiskey distilled at an alcoholic strength not exceeding 35 degrees overproof should in the scheme of Excise duties receive a distinct advantage over spirits distilled at a higher strength. (17) That a true brandy is a spirit derived solely from grape wine, and a true whiskey is a spirit derived from barley malt, but the usage of trade now recognises the brandy of commerce, which is a blend consisting of a percentage of grape wine spirit, the product of a separate distillation, mixed with spirit derived from other materials and independently distilled; that the whiskey of commerce is a blend consisting of a percentage of malt spirit, the product of a separate distillation, mixed with grain spirit independently distilled. (18) That no spirit should be recognised as a blended brandy unless it contains at least 25 per cent. of grape wine spirit, the product of a separate distillation, at a low alcoholic strength; and that no spirit should be regarded as a blended whiskey unless it contains at least 25 per cent. of spirit derived from malted barley, the product of a separate distillation, at a low alcoholic strength."

APPENDIX I.

Handed in by Sir DANIEL MORRIS, K.C.M.G., Imperial Commissioner of Agriculture for the West Indies.

I.

Extract from "West Indian Bulletin," Vol. 8, No. 1, 1907.

JAMAICA RUM.

BY THE HON. H. H. COUSINS, M.A., F.C.S., Government Analytical and Agricultural Chemist, Jamaica.

To deal with this matter in a manner adequate to its importance, and up to the standard of thoroughness to which the members of this Conference are accustomed in the treatment of the subjects brought before them, would involve a communication of such length as to be beyond all reasonable limits on this present occasion. Subject to Sir Daniel Morris' approval, I have in preparation another paper, for publication in the "West Indian Bulletin," in which the general subject of rum is more fully dealt with, and a summary of the outcome of the investigations that have been made upon it by the officers of the Sugar Experiment Station in Jamaica, together with a report prepared by the late Fermentation Chemist, Mr. C. Allan, B.Sc., of his observations during his three years' study of the micro-organisms of rum, are presented.

I now propose with your kind indulgence to attempt a brief description of the miscellaneous types of sugar-cane spirit included under the generic name "Jamaica rum," and to illustrate this by submitting a series of typical samples for your examination.

As in all special industries, we have our trade secrets in the manufacture of Jamaica rum, and it is notorious that the rum trade is one of the most jealous and unapproachable of business interests.

It would not be fair, therefore, to attempt to disclose before such a gathering as this, any special secrets which it has been our lot to discover in the course of the investigations into the problems of rum manufacture, that have been made in Jamaica during the past three years. At the same time, I do not fear the competition of the other sugar-producing Colonies with Jamaica in the manufacture of rum, and I am satisfied that the planters in this island have everything to gain, and very little to risk, by the fullest possible inquiry into all branches of the rum industry. Jamaica rum is, to a large extent, the natural outcome of local conditions that are apparently unique, and it is not to be expected that the laborious and slow minutiæ of a high-flavoured rum process could ever form part of the industrial working of a large sugar factory in Cuba or in British Guiana.

CLASSES OF JAMAICA RUM.

To understand the wide differences in the quality of Jamaica rum, we must first recognise that there are three distinct classes of rum produced in the island, each adapted for a particular market, and each judged by a different standard of excellence.

To answer the question—"What is a good Jamaica rum?" involves a second inquiry: "To what class of Jamaica rum do you refer?" The three classes are as follows:—

(1) Rums for home consumption, or "local trade quality."

(2) Rums for consumption in the United Kingdom, or "home trade quality."

(3) Rums for consumption on the Continent, or "export trade quality."

Each of these grades of rum meets the requirements of a special market, and is judged by a different standard of quality. I would particularly urge that these three markets, being self-contained, do not compete one with the other, and that the idea that the producers of export quality are thereby prejudicing the sales and commercial success of the "home trade" qualities is entirely without foundation.

So far as I have been able to arrive at the facts, the commercial spheres of the three classes of rums are entirely distinct, and there is no reason to believe that the production of high-flavoured rums for blending on the Continent is in any way prejudicial to the interests of the home trade Jamaica rums consumed in the United Kingdom.

Each class of rum is entirely legitimate, and there is no reason whatsoever why the makers of different types of Jamaica rum should be jealous one of the other. Again, any competition between individual estates is also without reasonable basis. Unless an article is producible in adequate quantity, and with sufficient variety of quality to enable the variable tastes of consumers to be catered for, no satisfactory trade can be developed.

With regard to the export qualities, I have received the most convincing assurance that the danger of the future of this trade lies not in over- but in under-production.

CLASS I. LOCAL TRADE QUALITY.

The most sensitive barometer of the material prosperity of the population of Jamaica is to be found in the Collector-General's returns of the rum duties.

Those of you who visited Port Antonio on Saturday might have observed mural notices to the effect that "rum ruins"—a statement which is not open to question when the rum consumed and the cubic capacity of the consumer are to any large extent in an inverse ratio, and in favour of the liquor.

When we consider, however, that the local consumption of rum does not exceed three or four bottles per head per annum, the Jamaican cannot be charged with ruining himself with rum to any great extent.

From the point of view of the Revenue and the administration of Government, it is only to be regretted that our people are unable to afford the luxury of consuming three or four times as much rum as they do at present, so that a marked reduction in taxation could be effected. While rum remains the wine of the country, so far as the lower orders in Jamaica are concerned, nothing is so striking to an observer of the habits of the upper classes, as the very large extent to which imported Scotch whiskey (some of it very recent, very fiery and of very patent-still quality) has displaced rum. The high-class trade in old rums of delicate softened flavour, which were formerly so highly thought of by the planters and moneyed classes, has largely disappeared, and it would probably be most difficult to obtain a choice mark of an old rum, which has not been blended, from any spirit merchant in Jamaica to-day. Blends are the order of the day, and the public-house trade is the chief field in which the local quality of rum is employed.

For this purpose a light rum that will age or mature very rapidly is a great desideratum. These rums are mainly produced in Vere and St. Catherine, and are the result of light settings and a quick fermentation. The stills are heated with steam coils, and double retorts are used.

The ether content of these rums varies from a minimum of 90 parts per 100,000 volumes of alcohol to about 300 parts. The bulk of this spirit would average from 180 to 220 parts of ethers. It will be noticed from the samples submitted for inspection that these rums have a delicate, pleasant aroma, and when broken down with water yield a light type of residual flavour which is markedly inferior to that of the rums in Class II.

The basis of flavour of these rums is principally due to acetic ether, while the characteristic flavour and aroma of each estate's mark appear to be due in every case to traces of the ethers of the higher acids, and, in a less degree, to traces of caprylic alcohol and other higher alcohols of an aromatic nature.

CLASS II. HOME TRADE QUALITIES.

These are sometimes alluded to as "public-house rums," and represent the class of spirit which is required for the use of the spirit trade in the United Kingdom as "Jamaica rum." Owing to the strenuous efforts of Mr. Nolan, the protector of Jamaica rum in the United Kingdom, much interest has recently been

shown by the retailers and consumers at home in genuine "Jamaica rum." The rums of the class to which I now refer, and which constitute the bulk of the rum exported from Jamaica, represent the type of spirit which Mr. Nolan is seeking to advertise, and to protect from fraudulent adulteration, and from the competition of spurious Jamaica rum in the United Kingdom.

It was at one time considered that an analytical standard of ethers could be fixed whereby a genuine Jamaica rum could be differentiated from a patent-still Colonial rum or a blended Jamaica rum. While, however, the best types of "home trade rums" contain 300 to 500 parts of ethers, and the great bulk of the rum exported from Jamaica is well above a standard of 200 parts of ethers, there are certain marks of rum (and among them some of stout body and attractive quality) which are as low as 100 parts of ethers. Except in cases of gross adulteration, therefore, purely analytical evidence is not of much avail in deciding whether a rum be a genuine Jamaica rum or not. A proposal to prohibit the exportation of any rums below a standard of 200 parts of ethers was seriously considered by the planters last year, but was thought to be unfair to individual estates, and eventually was abandoned.

The formation of a Jamaica rum syndicate whereby a monopoly of this article is sought by a corporation to enable a higher price to be obtained has recently been effected. If the syndicate can carry through its undertakings, an increased price to the retailer of 1d. per bottle of genuine Jamaica rum would suffice to secure the planters an additional 6d. per gallon for their rum, and provide a fund of £30,000 a year for advertising the merits of "Jamaica rum."

I estimate that a capital of £500,000 is required to ensure the full operation of this scheme. It must be remembered that if a puncheon of rum be sold for £10, the British Revenue charges amount to £75, and the Corporation will require a capital of £85 before the puncheon of rum can be dealt with as a commercial article. A large trading capital to allow of credits to publicans and other customers would be necessary. If this enterprise could be floated by interesting a large number of retailers in the shares of the company, as was done by the Guinness flotation, it is reasonably certain that a great success could be achieved.

The best rums for the home trade are made in Westmoreland, while some very fine rums are also produced in Clarendon, St. James, and Trelawney, which fall in this category.

These rums are generally produced by a slower type of fermentation than the local trade rums, and some of the best marks are produced in ground cisterns, and are slightly flavoured by the addition of some sour skimmings to the fermented materials. These rums are characterised by a high standard of heavy residual body. These are mainly ethers of acids of high molecular weight. These acids are not producible from sugars, and are almost absent in rums other than Jamaican, which are produced from diluted molasses without dunder or acid skimmings, and distilled in patent stills. Our investigations indicate that these higher acids result from the bacterial decomposition of the dead yeasts found in our distillery materials in Jamaica, and I am forced to the conclusion that the adherent yeasts in the old ground cisterns have a good deal to do with the fine flavour of many of these home trade rums.

When in London recently in the office of the leading broker who handles Jamaica rum, I was shown samples of the chief marks of home trade rums which were considered to set the standard of quality. "We do not want ethers, but a round rummy spirit," said this broker. I was pleased to find, however, that the marks selected as standards were all of high ether content (from 300 to 450 parts of ethers). They had, however, a very good standard of heavy residual body, and the blend of flavours was both mellow and full.

A trade expert in Jamaica, from whom I have obtained help on various occasions, writes me: "The earmarking of rum is to my idea a mistake, as any one with the least elementary knowledge of spirits knows that a blend is better than a naked spirit, always provided the blender knows his business."

So far as the rum syndicate is concerned, there is no reason whatever why our Jamaica rums should not be blended one with another in order to get a round, full, and attractive blend; and it is to be presumed that this would be necessary in the development of the bottling trade.

The samples of home trade rums submitted have been selected from a large number as representative of this class of Jamaica rum. As compared with the local trade rums, it will be noted that they have a stouter, fuller, and more fruity aroma, and that when broken down with water, the spicy residual flavour is strongly marked.

It was impressed upon me in London by the trade experts that the planters in Jamaica should recollect that, as the duty payable on rum in England was about eight times that of its value to the planter, it was a most serious matter for the buyers at home if any fault should be found with the rum after it had been cleared from bond. Points that required attention were: (*a*) cloudiness on dilution; (*b*) a burnt flavour; (*c*) excessive obscuration.

We have found the chief cause of cloudiness in Jamaica rums to be due to high settings, and such an intensity of bacterial action that higher alcohols are produced in excess. The charge of wines in the retort being inadequate to fractionate these impurities, they enter into the rum and cause cloudiness on dilution. To remedy this fault, insist on the distiller testing the spirit with water before accepting it as rum. All cloudy distillate should be set aside for high wines. The fermentation should then receive attention, and, if necessary, the vats should be limed to secure a clearer fermentation.

The burnt flavour, too, is common in the case of fire-heated stills. It is frequently quite unnoticeable in the sample until it has been freely diluted with water. I am convinced from the results obtained at Shrewsbury estate in Westmoreland, that all home trade rums could with advantage be distilled in stills heated by a steam coil. Burnt rum should then be unknown. The fetish of the "direct fire," that still lingers in the minds of Scotch whiskey distillers has no basis at all where Jamaica rum is concerned, since any excessive firing results in a most serious injury to the spirit produced.

As regards obscuration, there is now a demand for fully coloured rums (say No. 19 on Lovibond's scale) with an obscuration not exceeding 1¼ to 1½ per cent. of proof spirit. This is readily attainable if care be taken in preparing the colour.

CLASS III. EXPORT TRADE QUALITY.

Jamaica has long been famed for its rum, and a certain proportion of the crop has for very many years found its way to the markets of Europe. Thirty or forty years ago, a trade in high-class drinking rums was carried on with the Continent; and I recently interviewed in Hamburg a merchant who had in former days done a good trade in choice marks of Jamaica drinking rums. He bemoaned, however, that this trade had practically ceased since 1889, when the German Government raised the duty on Jamaica rums from a very low rate to the relatively high one that now obtains, which is equivalent to about 8s. per liquid gallon. From that time the entry into Germany of Jamaica rums, suitable for direct consumption, has been made almost impossible. The low rates of Excise on the domestic potato and grain spirits render the competition of home trade qualities of Jamaica rums with the German spirits out of the question under present conditions.

To the firm of Finke & Co., of Kingston and Bremen, and the enterprising planters of the north side of the island, belongs the credit for having met this obstructive tariff by the development of a considerable trade in high-flavoured rums, of such remarkable blending power that they could stand the high import duty, and yet be utilised by the German blenders for producing a blended rum capable of competing with local distilled spirits subject to a merely nominal Excise.

It is no exaggeration to say that to this enterprise alone is due the survival of the small estates on the north side, despite their great disadvantages as sugar-producing estates under the stringent conditions of the sugar market during the past ten years. There is much unreasonable prejudice against this industry among planters who are interested in home trade rums; and it has often been suggested that these high-flavoured rums are merely adulterants, and gain a profit at the expense of the genuine common clean drinking rums.

If these rums were used for blending with silent spirit in the United Kingdom, to produce blends that were sold as Jamaica rum, there would be some ground

for this view; but so far as evidence can be obtained, it would appear that these rums are all used on the Continent, and are not in competition with home trade rums at all.

As the only discrimination in the United Kingdom against our Colonial spirit is the surtax of 4d. per gallon, there is no adequate inducement to the blenders to use high-flavoured rums at high prices for the English market.

The evidence of Mr. Steele, C.B., and of the official statistics of the German importations of Jamaica rums, all indicate that our high-flavoured rums, even when sold in London, or shipped to buyers in London, eventually pass on to the Continent either in the original puncheons, or as vatted rums.

These export rums are commonly known as German-flavoured rums in Jamaica, and are produced by a process that could only be adopted on a small estate with a relatively enormous distillery capacity. Instead of thirty hours' fermentation, as in the case of a Demerara or Trinidad rum, these German-flavoured rums demand a fermenting period of fifteen to twenty-one days.

The yeasts at work are of the fission type entirely, and the whole process is operated under intensely acid conditions. It is remarkable that these fission yeasts should be able to attenuate a liquor with an acidity of 3 per cent., while the oval budding yeast may be paralysed with an acidity of less than one-fifth of this amount.

These flavoured rums contain, as might be expected, a relatively high proportion of ethers. Some makes are as low as 600 or 700 parts of ethers, but are, as a rule, relatively rich in heavy-bodied ethers, and are possessed of great stretching power.

The finer qualities contain some 1,000 to 1,200 parts of ethers, and occasional samples may even attain a standard of 1,500 or 1,600 ethers. We have found that about 97 per cent. of these ethers are acetic ether, about 2 per cent. consist of butyric ether, traces of formic ether may be present, and from one-half to three-quarters per cent. of the total consists of heavy ethers derived from acids of high molecular weight.

It is upon this small trace of heavy ethers that the chief character, and, indeed, the commercial value of a high-flavoured rum depend.

As a rule the presence of high ethers is also associated with that of higher alcohols of a peculiar spicy and attractive fragrance.

Were these rums merely dependent on acetic and butyric ethers for their peculiar value, it is obvious that our trade would be at the mercy of any and every competitor.

The higher ethers, however, have such an intensity of aroma and flavouring power that they entirely dominate all other constituents; and the more we study the chemistry and the manufacture of German rums the more convinced do we become of the great difficulties in the way of reproducing them at will.

No two estates produce the same character of flavour. The differences are due to the variation in the bacterial flora, and these again are dominated by the differences in the composition of the material fermented, and the conditions under which it exists.

This manufacture is peculiarly precarious and erratic, both as to yields and to quality of produce. It is no unusual thing to find successive batches of rum from the same estate, apparently produced under identical conditions, varying in value from 8s. to 4s. per gallon. When the complicated process is studied, and the entire absence of all rational control is realised, it is only surprising that the results are not far less uniform than they are.

The trade in these rums puts a high premium on the judgment of the buyer, and the science of rum smelling is found in its highest refinement in the valuation of high-flavoured rums. To attain a high measure of efficiency, long training and experience are necessary. A delicate or highly sensitive nose is not so necessary as a faculty for the memory of smells. A good flavoured rum presents to the sense of smell a blend of various distinct types of smell in a proportion that is both attractive and satisfying to the trained nose.

An analytical faculty must be developed whereby the ingredients may be sorted out, and approximately appraised by the trained nose under various headings.

Thus a good standard of acetic ether, associated as a rule with a high standard of ethers and intensity of flavouring power, is appraised under the heading "pepper" or "rasse," that is, breed. This is best appreciated when the spirit is smelt before being diluted. Butyric ether gives a delicate fruity flavour, and rums deficient in this ingredient are sometimes described by brokers as "stalky."

Homologues of caprylic ether are apparently the constituents of the pine-apple flavour; while "fruit" and "butter" are other characteristic types of smell that reside in the heavy residual ethers.

The heavier ethers are more readily appreciated when the rum is diluted with an equal volume of water. This dilution at once reduces the vapour tension of the acetic ether, which then becomes greatly reduced in pungency, while the heavy oily ethers come out and assert their remarkable predominance.

We must regard the acetic and butyric ethers merely as media for the conveyance of the heavy smell of the residual ethers, and as being of very secondary importance in themselves, although constituting 99 per cent. of the total ethers in the rum.

The chemists present will, I think, concede that the chemistry of the residual and characteristic flavours of these rums is a matter of very serious difficulty to investigate, owing to the extremely minute proportions in which these intensely aromatic compounds exist in the rum.

I will now circulate for your examination a series of samples of German-flavoured rums illustrating the various types at present being produced in Jamaica.

The blenders on the Continent would purchase five or six of these different rums, and blend them into a general purpose mixture, capable of being blended with silent spirit to give a blended rum of attractive style, quality, and flavour.

It would appear that the bulk of the so-called rum consumed on the Continent of Europe is prepared from artificial essences, and that the trade in "Kunot rum" has been detrimental to the interest of the Jamaica high-flavoured rum. The experiment station has been experimenting—with some success—in the direction of increasing the blending value of these rums so that they can compete on more equal terms with the sophisticated article on the Continent.

An experiment has been carried out at Hampden estate in St. James to test this matter, and although the commercial results are not yet complete, we have every reason to believe that in the direction of increasing the blending power of our flavoured rums must lie the future of this industry.

II.

Extract from a Report of the Island Chemist, published in the Supplement to the "Jamaica Gazette," September 26th, 1907.

Investigation of Jamaica Rum.

This work, which was started in 1903 by the appointment on a three years' contract of Mr. C. Allan, B.Sc., as fermentation chemist to co-operate with the laboratory staff in the investigation of Jamaica rum, has reached the first stage in its progress by the completion of Mr. Allan's period of service.

At the outset practically nothing was known as to the composition of the materials used and of the changes which occurred during the process of fermentation employed in the manufacture of Jamaica rum, and Mr. Allan carried out a valuable piece of work in securing information on these points.

He was able to establish the general principle upon which the fermentation of the various products was based, and to show clearly that the "flavour" of Jamaica rum to which the great variety in character and quality of our island spirits is due was the result not of alcoholic fermentation by yeasts, but to acidic and putrefactive fermentations by bacteria.

This is a fact of prime importance in the scientific study of rum manufacture, and a further study of the chemical composition of Jamaica rums indicated that

the compound ethers are the chief source of the special aroma on which the commercial value depends.

Mr. Allan summarised the results of the experiment that had been made in the laboratory, the experimental distillery, and on estates in a course of lectures which he gave to the distillers in October. These are to be published as a part of a general publication on Jamaica rum for the use of our distillers which is now in preparation.

In November Mr. S. F. Ashby, B.Sc., late Carnegie Research Fellow and Bacteriologist at the Rothamsted Experimental Station, was appointed to take up the combined duties of bacteriologist and fermentation chemist. Mr. Ashby is devoting himself to the isolation and study of the individual organisms at work in estates' materials and to the investigation of the comparative value for alcohol production and flavour of the yeasts and other organisms thus obtained.

It is hoped that during the next three years some valuable discoveries, capable of affecting favourably the productive power of our distilleries, will result from these labours.

The high ether process, as invented by me for reinforcing the ether content of rum by recovering the volatile acids left in the spent liquor from the retorts and returning them into the process, was carried out on a commercial scale on six estates during the crop.

On three estates making a common clean rum, the process was systematically carried out to increase the standard of ethers, and the whole crop was carefully regulated to a uniform standard about 50 per cent. higher than that otherwise obtainable. As the materials employed were identically those resulting from the fermentation in each case, the result was simply that of an intensification of the normal flavour of the rum without altering its character. The rums were sold in London and favourably reported upon by brokers and merchants as improved in quality. The manager of one estate gave me figures showing a net profit of £200 on the season's operations under the process applied in this way.

It was necessary to keep this enterprise secret owing to the baseless and ill-informed prejudices of brokers and others in the rum trade against the new process. It was ignorantly supposed to be a process of chemical adulteration, and some London brokers even declared their belief that sulphuric acid was a necessary ingredient of rum produced under the process.

It should be understood that nothing passes into the rum which is not normally present, and that the use of lime to combine with the acids in the lees to enable a solid residue to be recovered by evaporation and the subsequent liberation of the acids by the addition of the requisite amount of sulphuric acid to the lime or salts, simply results in a sediment of inert sulphate of lime, which is removed by filtration, and the practical result is that volatile acids produced by fermentation and at present wasted, are recovered and returned into the process to increase the output of ether natural to the rum in question.

It should also be understood that the process does not create flavour or impart a high flavour to a common rum, but is merely a convenient practical means of reinforcing the normal flavour of a rum as resulting from the products of the fermentation by which it was produced.

On three estates the process was tried on an estate scale with high-flavoured or German rums. In one case, although the rum was sold at a higher price, the general management of the fermentation was unsatisfactory, and the yield so poor that the distiller was dismissed and a reversion to the old method was decided upon. The poor yield was in no way due to the process, but to attempts to produce a superior flavour and to provide the requisite supply of acid material for the production of a high ether rum, whereas, in view of trade prejudices, it was decided by the management to make a rum of ordinary ether standard.

This experiment threw no light on the merits of the process as applied to a high-flavoured rum, and I am satisfied from experience that under favourable conditions of management the financial outcome should have been encouraging.

At Hampden estate an excellent plant for operating the whole production of the distillery under the high ether process was erected. Thirty puncheons of rum, varying but slightly from a uniform standard of 3,500 parts of ethers, as against 900 for the ordinary liquor rum and 300 for the low wines rum, was produced. This product was boycotted by the merchants and brokers in Jamaica and London, and was finally reported upon as "commercially unsaleable" by the London agents of the estate.

It was considered valuable by some buyers in Germany, but they were afraid to buy it, because some expert pronounced it to be flavoured with chemical essences. The outlook for the proprietor of Hampden estate, who had taken up this experiment with great zeal and had carried out the process with extraordinary skill and success, was so discouraging that I decided personally, while on leave, to enquire into the matter in England and in Germany in the course of my enquiries into the rum trade.

Having obtained a fortnight's extra leave on half-pay I visited London, Glasgow, Hamburg, and Bremen with introductions from the Customs and the Foreign Office, which enabled me to interview traders as an accredited Government officer. It is gratifying to be able to report that all the rum was sold as a result of this effort, and that the bulk of the thirty puncheons was sold for 8s. per gallon. It was evident that the large holders of stocks of the ordinary "German" or "Export Quality" rums viewed with apprehension a process for increasing the blending value of Jamaica rums as likely to depreciate the value of old stocks. Again, the standard of ethers in this rum being four times that of the ordinary make, caused the concentrated rum to be viewed with suspicion as an artificial essence.

This experiment proved that the whole output could be turned into a rum at 3,500 ethers from the same materials now producing a rum averaging about 700 ethers (liquor and low wines rum together). In other words, the process is capable of increasing the ether content of a "German" rum five-fold.

It must be noted that the fermentation and materials were not interfered with in any way.

The financial results on the process rum were most encouraging, but it is to be regretted that the rum made by the old process after the concentrated rum was reported unsaleable at any price in London, realised poor prices, and I cannot help thinking was deliberately underpriced in London as a result of trade prejudices.

The commercial bearings of this matter are very complicated, and some years will be required before the real merits of the case can be decided.

A very interesting experiment was carried out on an estate in Vere making a common clean rum. In this case a special fermentation of flavouring materials for making acids was set up separately, and this was distilled separately so as to obtain the volatile acids. These were then introduced by my process into the ordinary common clean materials, and a rum was obtained of about 2,000 ethers that sold for 5s. 6d. per gallon. This was tested by blenders on the Continent, and found so satisfactory that a large order was sent which could not be filled owing to crop having been completed. This is the most remarkable demonstration of the ether theory yet obtained. Rum was raised from 2s. 3d. to 5s. 6d. a gallon, simply by increasing the ethers and developing a suitable fermentation of flavouring material for the supply of the volatile acids.

At the wish of the two Planters' Associations, patents have been taken out in my name for the benefit of the sugar experiment station should the patents possess a commercial value in the following countries:—

United Kingdom	Trinidad
Cuba	Barbados.

As the process is applicable to whiskey and brandy, it is possible that it might find use for reinforcing the ether content of these spirits, and that royalties might be obtained from the foreign rights under the patents.

APPENDIX M.

Documents transmitted to the Royal Commission by the Colonial Office.

I.

COPY OF A DESPATCH FROM THE GOVERNOR OF BRITISH GUIANA, forwarding a statement dealing with the production, distribution, and consumption of "British Guiana" (or "Demerara") Rum.

Government House,
Georgetown, Demerara.
18th September, 1908.

My Lord,

At the request of the British Guiana Planters' Association I have the honour to transmit for submission to the Royal Commission on Whiskey and other potable spirits, should your lordship consider it advisable to do so, a statement, in triplicate, dealing with the production, distribution, and consumption of "British Guiana" rum, or, to call it by the name under which it is better known, "Demerara" rum.

2. The statement is signed by the Director of Science and Agriculture, who is also Government Analyst and Chairman of the Board of Agriculture; by the Chairman of the British Guiana Planters' Association; by the President of the Royal Agricultural and Commercial Society of British Guiana; and by the Chairman of the Chamber of Commerce.

I have, etc.,
(Signed) F. M. Hodgson.

The Right Honourable the Earl of Crewe, K.G., etc.

The Production, Distribution and Consumption of Rum in British Guiana; with special reference to Distillation in Pot or Vat Stills and in Coffey, Continuous or Patent Stills, and to its varying Contents of Esters.

From the inception of the sugar industry in British Guiana spirits have been prepared by the fermentation and distillation of molasses, the bye-product in the manufacture of sugar from the sugar-cane. The spirits so obtained have invariably been known as "Rum," and it is only very recently that their right to that name has been questioned.

The name rum has always been applied to any spirit prepared from the sugar-cane, either by its juice being directly fermented or being concentrated to syrup before fermentation, or from its bye-products during the manufacture of sugar; the earliest official mention of such spirits under the name of "rum," according to N. Darnell Davis (Timehri, Vol. IV., 1884, page 80), being in an order of the Governor and Council of Jamaica dated July 3rd, 1661.

Rum is prepared in the British West India Colonies from various products of the sugar-cane. For instance, in Barbados considerable quantities used to be, and probably still are, prepared from fermented cane juice; in Grenada it is largely prepared by boiling expressed cane juice to a thin syrup, cooling, suitably diluting, and allowing it to ferment; in St. Vincent it is made from the molasses and skimmings from the manufacture of Muscovado sugar; in Barbados it is principally obtained from the molasses from Muscovado sugar and from that from vacuum pan sugar, whilst in British Guiana it has been prepared from the molasses from both Muscovado and vacuum pan sugars, but its production from the former has gradually lessened until now it is, in licensed distilleries, entirely prepared from vacuum pan molasses, with at times varying, but always very small, proportions of other sugar-containing waste products of the sugar-cane.

The production of rum has been the subject of investigation in British Guiana on scientific lines for many years past and as far as the production of alcohol from the sugars present in the wash (wort) it has in many estate-distilleries been brought to a condition approaching perfection. The theoretical yield of proof spirits per five degrees of attenuation for wash (wort) set with molasses containing approximately equal proportions of saccharose and of glucose is 1·16 gallons of proof spirit for every 100 gallons of wash, and many of the distilleries in practice obtain from ·95 to as much as 1·04 proof gallons of spirits per five degrees of attenuation from every 100 gallons of wash which they distil.

The principal cause of the difference in flavour of the rum produced in various places lies in the methods of fermentation used. There are two distinct types of rum, one produced by slow fermentation, lasting from 10 to 12 days, or even longer, of wash set at a relatively high density—from 1,072 to 1,092; the other, a purer spirit, produced by a clean and rapid fermentation complete in from 36 to 48 hours of wash set at a low density—usually about 1,060. In the production of the former type wild yeasts and their concomitant bacterial organisms are given every opportunity to increase at the expense of the yeast proper, the fermentation being retarded by the addition to the wash of the spent lees or "dunder" from earlier distillations, and by the wash being set at a high gravity. Highly flavoured spirits are thus obtained at the cost of the quantity produced.

In British Guiana it is not financially feasible in the large sugar factories to successfully make rum by the slow fermentation process. To do so plantations would have to be supplied with six or eight times their present fermentation-vat capacity, and the general work of their factories would be greatly hampered. It is a question of slow fermentation with low production of alcohol which may be of high contents of esters and of well-marked flavour as opposed to quick fermentation with high production of alcohol—a pure spirit but which perhaps is commercially regarded as a lower grade of rum than the Jamaica product. The principal representative of the first type is Jamaica rum, that of the second is British Guiana or "Demerara" rum, and we submit that both of these have an equal right to the name of rum. The rums prepared in Grenada, St. Vincent, Antigua, Dominica, St. Kitts-Nevis, and certain grades of Barbados and St. Lucia rums belong to the slow fermentation type, while other grades of Barbados and St. Lucia rums and Trinidad rum belong to the quick fermentation type.

In the distilleries in Colonies where rums of the slow fermentation type are produced the wash or wort is set up for fermentation from molasses, skimmings, and dunder—the latter being the lees from former distillations—with water sufficient to reduce the mixture to varying gravities of from 1,072 to as high as 1,092.

In British Guiana the wash (wort) is prepared by diluting molasses with water to a density of 1,060, and it is rendered slightly acid by the addition or sulphuric acid in quantity sufficient to set free more or less of the combined organic acids, but so as not to have uncombined sulphuric acid present in the wash, whilst in some of the distilleries additions of sulphate of ammonia in small proportions are made to the wash, in order to supply readily available nitrogenous food for the yeasts and to thus enable them to multiply with rapidity, and to retain a healthy active condition. The reason for rendering the wash slightly acid is to guard against the excessive propagation of the butyric and lactic acid organisms, and to render it more suitable for active alcoholic fermentation. Within a very short time from the molasses being diluted it enters into vigorous fermentation and the fermentation rapidly proceeds to more or less complete attenuation.

Methods of Distillation.

In places where rums of the slow fermentation type are produced the stills used are usually direct fire-heated, but occasionally steam-heated, metal common-pot stills generally with one or two retorts which act as more or less imperfect rectifiers. In order to improve the quality of the rum by increased degree of rectification various additions and alterations have been devised for the class of still used in these places. For instance, as far back as 1825 Winter's still was devised for this purpose, and shortly after was in use in Jamaica. The essential principle of Winter's still has been adopted in many of the vat stills so commonly used in British Guiana.

In British Guiana the distilleries are of three kinds:—

1. Those using pot stills, or vat stills, which are practically only modified pot stills.
2. Those using both pot stills or vat stills and Coffey or other continuous rectifying stills.
3. Those using only Coffey or other continuous rectifying stills.

Generally speaking the stills used are much larger and of higher class than are the majority of those in Jamaica.

There were 44 distilleries at work in 1905-6, 43 in 1906-7, whilst 42 are at present operative. Thirty-two distilleries use pot or vat stills only, three have both pot or vat stills and continuous stills, whilst seven possess continuous stills only.

Vat stills consist of cylindrical wooden vessels built of staves strongly hooped with wrought iron. They have high copper domes covering openings in the heads of the vessels which communicate with a retort or retorts of the Jamaican pattern, but, as a rule, the retort acts as the lowest vessel of a rectifying column. As in Winter's still a spiral pipe or a series of small perpendicular pipes descends down the interior of the column through which cold water is run whenever distillation is in progress, and by which the spirit vapour undergoes a process of rectification as it ascends the column before passing into the condenser. The vat stills are heated by injection of steam.

The Coffey or continuous rectifying stills used are of well-known types and are usually built locally, their columns being constructed of colony grown timber.

The Production, Exportation, and Consumption of Rum.

The following table shows in round figures the quantities of proof gallons of rum produced in the distilleries during the last three crop years:—

Proof gallons of Rum produced.

Distilleries using	July 1st to June 30th. 1905-1906.	1906-1907.	1907-1908.
Vat stills	2,167,480	2,519,540	1,958,930
Vat and continuous stills	750,240	565,510	440,560
Continuous stills	695,910	790,980	630,020
	3,613,630	3,876,030	3,029,510

The following statement shows the quantities of rum produced in the distilleries and exported during the same period:—

Proof gallons of Rum exported.

Distilleries using	July 1st to June 30th. 1905-1906.	1906-1907.	1907-1908.
Vat stills	2,112,790	2,479,530	1,912,890
Vat and continuous stills	674,480	544,740	425,000
Continuous stills	642,340	693,230	533,670
	3,429,610	3,717,500	2,871,560

The amounts of rum which were sold for consumption in the Colony were as follows:—

Local Consumption.

Distilleries using	July 1st to June 30th. 1905-1906.	1906-1907.	1907-1908.
Vat stills	60,830	40,260	46,070
Vat and continuous stills	25,760	20,770	15,560
Continuous stills	54,570	97,750	96,360
	141,160	158,780	157,990

The above figures, when reduced to percentages of the total amounts produced, exported and consumed in the colony show the following:—

Distilleries using	Produced.	Exported.	Consumed locally.
	1905-1906.		
Vat stills	59·9	61·6	43·1
Vat and continuous stills	20·7	19·6	18·3
Continuous stills	19·4	18·8	38·6
	1906-1907.		
Vat stills	65·0	66·7	25·4
Vat and continuous stills	14·6	14·6	13·0
Continuous stills	20·4	18·7	61·6
	1907-1908.		
Vat stills	64·6	66·6	29·2
Vat and continuous stills	14·5	14·8	9·8
Continuous stills	20·9	18·6	61·0

The above give the following as the average annual amounts recorded during the three years:—

Distilleries using	Produced.	Exported.	Consumed locally.
Vat stills	63·2	65·0	32·6
Vat and continuous stills	16·6	16·3	13·7
Continuous stills	20·2	18·7	53·7

The mean annual export of rum from British Guiana, practically all of which was to the United Kingdom, during the three years, was 3,339,560 proof gallons, of which 2,168,400 gallons were produced in vat stills, and 1,171,160 gallons were in part the product of continuous stills, and in part the mixed products of continuous and vat stills.

British Guiana, therefore, is the largest exporter of rum—that name being used in the restricted sense attributed to it by Mr. Nolan, of Jamaica, of being applicable only to spirits not produced in continuous rectifying stills—its export being some 12 per cent. higher than that of Jamaica.

The foregoing tables and statements prove that two-thirds of the rum exported from British Guiana are made in vat stills which are virtually only improved pot stills, whilst two-thirds of that consumed in the Colony are the produce of continuous stills or are a mixture of vat still and continuous still spirits. This local preference for the lighter types of rum is very noticeable in other West Indian Colonies, for instance, in Barbados, and, we believe, in Jamaica.

Esters in Rum.

The advantages claimed for rum of the slow fermentation type distilled in stills of the kind commonly used in Jamaica are frequently stated to be its flavour and its great restorative powers due to its high contents of esters. As the esters contained in rum of every type consist mainly of ethyl acetate it is difficult to perceive how this not very pleasant substance can confer on rum the characteristic aroma of that spirit. This position has been somewhat departed from lately by the advocates of this type of rum, and they now appear to consider that all that the presence of esters in high proportions does is to indicate the existence of very minute amounts of some, we believe hitherto not isolated or identified, ester of the higher fatty acids, or of some other similar aromatic product in larger quantity than it occurs in other rums.

The proportions of esters in rums vary very greatly. Determinations made, prior to 1890, by W. M. Miller, on samples of Demerara coloured rum showed that in a series of nine rums the mean contents of esters as ethyl acetate were 163·6 parts per 100,000 of alcohol by volume, the maximum contents being 290, the minimum 47; whilst determinations made in the Government Laboratory of the esters in many samples of spirits produced in the Colony between the years 1892 and 1900 showed a mean contents of 72 parts of esters. A series of illicitly distilled rums, examined in 1903, yielded a mean contents of 52·5 parts of esters per 100,000 of alcohol by volume, with a minimum of 24 and a maximum of 115.

Samples of rum from every distillery in the Colony, taken by the Commissaries of Taxation, have been regularly submitted to the Government Laboratory for examination since the financial year 1901-2, and in a great number—over 400—of these the proportions of the esters have been determined.

The mean results of the determinations are as follows:—

Rum crop of	Esters as Ethyl Acetate parts per 100,000 of alcohol by volume.
1901-1902	104·
1902-1903	81·5
1903-1904	64·7
1904-1905	63·0
1905-1906	90·0
1906-1907	88·0
1907-1908	76·5

The above figures show that the mean contents of esters in rum, the produce of British Guiana during the past seven years, have been 81·1 parts per 100,000 of alcohol by volume, and that owing to causes which are at present unknown, the mean contents of esters per 100,000 of alcohol by volume in the annual rum crop have varied from 104 parts in 1901-2 to 63 parts in 1904-5.

The mean proportions of esters present in rums distilled by vat stills and by continuous stills are recorded as follows:—

Rum crop of	Esters as Ethyl Acetate parts per 100,000 of Alcohol by volume. Vat still produce.	Continuous still produce.
1903-1904	69·9	51·0
1904-1905	65·6	62·1
1905-1906	95·0	82·7
1906-1907	94·1	82·1
1907-1908	82·5	57·2
Means of 5 years' crops	81·4	67·0

Over the above period of five crop years the maximum proportion of esters found in rum, the product of vat stills, was 160·6 parts, the minimum being 33·1 parts, whilst in rum distilled in continuous stills the extremes were 140·8 parts and 23·7 parts.

Not only are there marked variations in the mean ester contents of the rum produced in different years, but similar variations occur in the produce of single distilleries. The following are instances of this:—

Distillery.	Crop of 1903–4.	1904–5.	1905–6.	1906–7.	1907–8.
	Esters as Ethyl Acetate in 100,000 of Alcohol by volume.				
A	66·0	82·6	66·0	107·8	101·2
B	52·8	85·0	121·0	72·6	70·
C	46·0	51·9	118·8	88·0	66·
D	39·5	55·8	59·4	44·0	52·8
E	67·4	69·4	121·0	118·8	103·4
F	51·5	41·2	61·6	83·6	59·4
G	45·7	67·3	99·0	96·8	59·4
H	46·1	42·6	61·6	70·4	66·

A, B, C, D and E are distilleries working with vat stills, whilst F, G and H are distilleries which use continuous stills.

It is evident from the figures recorded during the past five crops that in many cases it is not possible by means of the contents of esters to distinguish rum distilled in continuous or in Coffey stills from rum distilled in vat stills. The results offer no support to the theory that rum reputed to be the produce of a pot still or of a vat still can be judged by means of its contents of esters as to its admixture or not with rum the produce of continuous stills.

The question arises, is the presence of very high proportions of esters a desirable property of rum? It may be if the rum is to be blended with practically silent spirits for purposes of sale or to be used medicinally, but it is a matter of opinion whether or not it is desirable in spirits for ordinary consumption. The consumers of rum in the West Indian Colonies generally prefer a clean light spirit of medium fruity flavour, usually of low ester contents, to a richer, heavier, and probably a somewhat oily spirit of high contents of esters and rich in flavouring matters.

The practice in many distilleries twenty-five to thirty years ago was for the spirits of every distillation to be received in cans holding about five gallons each, and when rum of the best quality was required the distiller separately stored the second and perhaps the third cans of spirits resulting from a distillation for his best rum, which he termed "second can rum"; he used the contents of the first can by placing it for redistillation in the retort of the still, and those of the latter ones were regarded as ordinary spirits; that is, he rejected from his best produce the first portion of the distillate, which naturally was richest in aldehyde, formic and acetic esters, and the latter portion, which would be richest in butyric, capric and caproic esters, in amyl acetate and butyrate, and in the higher alcohols and the furfurols. Hence the efforts of the older distillers were to obtain a spirit with a medium amount of esters and free from objectionable impurities which he termed "hogue" or "hogre." One of the original objects of the Coffey or continuous stills was to automatically make the selection of the clean rum from the "heads" and the "low wines" of the distillate, which the distiller used to make by means of his system of "second can rum."

It is only of comparatively late years that the production of so-called "German rum" has been developed in Jamaica. This is a spirit containing an abnormal amount of esters—as much in some cases as 2,000 to 2,500 parts per 100,000 of absolute alcohol by volume—and the object of its production was to enable German silent spirits to be flavoured with it so as to pass as "Jamaica rum." Doubtless this policy on the part of certain Jamaican distillers of assisting their competitors to produce factitious rum is what has given rise to their recent campaign against all genuine rums which do not happen to have been produced in Jamaica.

J. B. HARRISON,
Chairman of the Board of Agriculture,
Director of Science and Agriculture, and
Government Analyst.

B. HOWELL JONES,
Chairman of the British Guiana Planters' Association, and
Chairman of the Agricultural Committee of the Royal Agricultural and Commercial Society of British Guiana.

JOHN B. LAING,
President of the Royal Agricultural and Commercial Society of British Guiana.

P. WYATT,
President of the Chamber of Commerce for the City of Georgetown.

II.

COPY OF A MEMORANDUM BY HERBERT HENRY COUSINS, M.A., F.C.S., Director of Agriculture and Island Chemist for Jamaica, relative to the extract from "Le Rhum et sa Fabrication," by Mr. E. A. Pairault, pp. 107-108—forwarded to the Colonial Office by the Governor of Jamaica.

This extract contains a series of false statements that are injurious to the trade and commerce of Jamaica. The public attention directed to these statements as a result of the evidence before the Whiskey Commission, in which this extract was cited, has resulted in serious injury to the trade in Jamaica rum on the Continent. A large firm in Bremen has complained to me that large contracts for the sale of Jamaica rums to buyers in Germany have been thrown up on the plea that the public do not desire to drink rum flavoured with tobacco and the skins of animals.

I will now deal with these false statements *seriatim*:

(1.) Hardly any Jamaica rum is exported to the United States (0·3 per cent. average of last three years).

(2.) It is not true that a good part of the Jamaica rum exported to England is made into whiskey. Anyone with a knowledge of the flavour of the two spirits would recognise the absurdity of such a suggestion.

(3.) No rum made in Jamaica is known as "stinking rum." I have a wide knowledge of planters and distillers in Jamaica and have never heard the term. It is unknown in commerce, and the term makes its first literary appearance in the work of M. Pairault.

(4.) We make high-flavoured rums in Jamaica that fetch three to four times the price of ordinary "common clean" rum, but it is not true that these rums are almost exclusively exported to Hamburg.

As a matter of fact nearly all rums that sell for 4s. a gallon and over are exported to merchants in England, and it is very rare for a rum of "three to four times the price of ordinary rum" to be exported to Hamburg. I speak advisedly from general knowledge of the marks and prices of Jamaica rums and of their sale, storage and use in trade derived from a close study of this industry for the past five years.

(5.) The statement that the intense perfume of these rums is due to the soil and the process of distillation is, in effect, quite correct. Certain sugar soils favour peculiar yeasts adherent to the canes and certain bacteria productive of esters and alcohols of high molecular weight which impart the aroma to the rum. The process of distillation is a scientific and practical process for securing the maximum development of fruit-ether yeasts and the esters and alcohols just mentioned.

In place of the 30-hour fermentation of diluted molasses, as at Martinique, our Jamaican distillers of high-class rums prepare acid and flavouring materials from the bye-products of the sugar-cane and ferment their wash for periods of 18 to 25 days.

The sediment of dead yeasts collected from the dunder is specially treated so as to undergo a slow bacterial action which produces acids and alcohols of high molecular weight.

(6.) It is absolutely false that these flavours are due to "des sauces dans lesquelles entrent la peau un peu échauffée ou ayant subi un court séjour dans les fosses

de tannerie." I declare from personal experience as a distiller and as the officer in charge of the investigations on rum in Jamaica that no flavourings are employed other than the specially prepared products of the sugar-cane in the distilleries in Jamaica.

Further, it is abundantly clear to anyone who has ever worked at the matter that such materials supply all that is required to produce any type of flavour found in the rums made in Jamaica.

M. Pairault has written without knowledge and made himself responsible for slanders that are absolutely without justification.

It is equally absurd and untrue that we use "American chewing tobacco" made by J. H. McClin, Virginia, or "orris root."

M. Pairault's statement of having knowledge of such procedure is the more remarkable, seeing that he has never seen a high-flavoured rum made in Jamaica and in all probability has never tested a good sample of high-flavoured Jamaica rum in his life.

(7.) The white rum coming from the still has the full flavour of the final product. We only add cane-sugar caramel to attain a colour averaging 19 on Lovibond's tintometer. The flavour of Jamaica rum is mainly due to ethers, and our rums contain more ethers than any other spirit distilled in any other country. These ethers are not derived from tobacco, skins, or orris root, but are produced by careful and elaborate acidic fermentations of sugar-cane products in combination with a main alcohol fermentation.

The yeasts and bacteria at work in a Jamaican distillery are unique. Our yeasts will stand an acidity of 3 per cent., while some species produce ethers almost exclusively.

(8.) I read with some amusement the ridiculous statement of M. Pairault, when his book first appeared. As his ideas were formulated in the shape of a gospel of silent spirit to the distillers of Martinique, I decided that the interests of Jamaica rum would be best served by ignoring his false charges against Jamaica rum, in gratitude for the good he would do to our trade by encouraging the production of a neutral flavourless rum in Martinique.

The publicity given to his fantastic statements owing to the proceedings of the Royal Commission on Whiskey has resulted in serious damage to the trade in Jamaica rums on the Continent. A sentimental revulsion, akin to that against tinned meats owing to the Chicago horrors, has been engendered amongst the public on the Continent. As the accusations are false, and based upon ignorance, it is clear that some emphatic means of contradicting these slanders is desirable, and I have been instructed to prepare in this memorandum a refutation of M. Pairault's false charges.

(Signed) HERBERT HENRY COUSINS.

Department of Agriculture,
Kingston, Jamaica,
24th October, 1908.

III.

COPY OF A LETTER FROM SIR F. BERTIE, with its enclosure, transmitted to the Colonial Office by the Foreign Office:—

Paris,
April 14, 1909.

Sir,

I have the honour to transmit to you herewith a copy of a Memorandum which I have received in reply to an unofficial representation which I addressed to the French Ministry for Foreign Affairs in accordance with the instructions contained in your despatch No. 41 Commercial (5395/09) of the 27th of February last, calling attention to certain unwarranted reflections on Jamaica rum contained in a work written by Monsieur E. A. Pairault, who is stated to have been sent on a scientific mission to the Antilles by the Minister of the Colonies.

The Memorandum states that no trace can be found of any official mission having been entrusted to Monsieur Pairault, and it is difficult to see how, in these circumstances, any further action can be taken by His Majesty's Government in the matter.

I have the honour to be with great truth and respect, &c.,

(Signed) FRANCIS BERTIE.

The Right Honourable
Sir EDWARD GREY, Bart., M.P., &c., &c.

"Suivant une note en date du 8 mars, émanant de l'Ambassade d'Angleterre, une plainte a été adressée au Foreign Office par la colonie de la Jamaique au sujet d'une brochure intitulée 'Le Rhum et sa fabrication,' écrite par M. Pairault, et éditée à Paris en 1903.

"La réclamation du gouvernement de la Jamaique porterait principalement sur le fait que M. Pairault aurait déclaré qu'il était chargé d'une mission scientifique aux Antilles par le Ministère français des colonies.

"Les recherches qui ont été effectuées jusqu'à présent par ce Département à la demande du Ministère des affaires étrangères n'ont pas permis de retrouver trace de la mission officielle qui aurait été confiée à M. Pairault."

APPENDIX N.

Handed in by Mr. F. L. TEED.

ANALYSES OF JAMAICA RUMS FROM THE DOCKS.

(All figures are expressed in parts per 100,000 fluid parts of absolute alcohol.)

Reference Number	14	15	16*	17	18	19	20	21
Acidity (calculated as Acetic)	99·4	59·5	53·6	83·8	76·5	71·3	89·8	57·2
Aldehydes (calculated as Ethyl Aldehyde)	47·1	28·2	27·9	25·6	28·7	37·1	37·4	56·5
Furfural	9·4	1·6	1·6	1·2	6·3	12·4	7·7	2·1
Ethers (calculated as Ethyl Acetate)	154·1	791·7	84·1	707·2	397·3	159·0	256·2	336·5
Higher Alcohols (colorimetrically)	89·5	76·6	152·6	89·5	162·6	102·1	102·2	89·8
Co-efficient of Secondary products	399·5	957·6	319·8	907·3	671·4	381·9	493·3	542·1

Reference Number	22	23	24	25	26	27	28	122*
Acidity (calculated as Acetic)	82·9	79·2	73·2	56·5	141·3	67·1	76·8	59·6
Aldehydes (calculated as Ethyl Aldehyde)	38·4	28·6	57·2	23·3	24·1	38·1	57·6	24·8
Furfural	1·6	1·6	12·7	4·2	1·6	7·4	12·8	3·1
Ethers (calculated as Ethyl Acetate)	216·3	855·0	236·3	223·7	787·3	361·8	265·9	93·3
Higher Alcohols (colorimetrically)	179·2	177·8	101·6	127·1	128·0	152·4	115·2	145·0
Co-efficient of Secondary products	518·4	1142·2	481·0	434·8	1082·3	566·8	528·3	325·8

* Said to be "Low Wines."

APPENDIX O.

Handed in by Dr. Fernbach.

Chemical Analyses.

		Degré.	Acidité.	Aldéhydes.	Furfural.	Ethers.	Alc. sup.	Coefficients.
Eaux-de-vie du Midi et d'Algérie—								
	1.	85·7	36·40	39·54	0·33	733·16	102·04	911·47
	2.	86·2	27·60	43·48	0·65	623·03	108·00	802·76
	3.	86·2	48·83	32·20	0·72	539·20	138·00	758·95
	4.	86	34·86	51·72	0·58	552·55	111·50	751·21
	5.	87·2	44·70	39·24	0·50	506·60	126·00	717·04
	6.	87·2	40·80	49·36	0·79	501·60	87·00	679·55
	7.	81·3	22·80	45·86	0·67	450·56	111·60	631·49
	8.	86·7	27·67	39·68	0·51	406·10	130·76	604·72
	9.	87·9	49·20	55·52	0·54	392·48	78·00	575·74
	10.	81·9	33·66	31·78	0·80	361·02	106·00	533·26
	11.	85·4	26·69	65·17	1·00	327·68	104·00	524·54
	12.	84·4	45·60	35·84	1·26	345·84	84·60	513·14
	13.	85	14·40	39·42	0·74	355·52	103·00	513·08
	14.	87·5	31·54	32·82	traces	358·03	82·00	504·39
	15.	87	28·16	40·25	0·76	275·00	125·00	469·17
	16.	85·6	22·10	36·03	0·95	269·16	107·31	435·64
	17.	69·8	36·00	27·88	1·05	220·00	124·02	408·95
	18.	84·2	28·37	31·42	1·07	256·03	89·70	406·59
	19.	86·3	25·12	36·18	0·86	239·08	97·54	398·78
	20.	86·5	33·30	22·94	0·71	221·30	113·44	391·69
Flegmes de farineux—								
	1.	52·7	18·40	70·90	0·3	50·10	313·32	452·12
	2.	80·7	11·90	27·26	0·28	34·90	295·00	369·34
	3.	62·0	22·70	40·00	0·00	51·10	220·00	333·80
Whiskey.		47·7	50·00	38·70	1·47	36·87	152·50	279·54
Cognac, type Anglais		—	77·32	12·60	1·70	110·00	120·58	322·20
Eaux-de-vie des Charentes (1906)—								
Grande Champagne	1.	70·5	27·23	58·20	1·37	104·85	145·00	336·65
,,	2.	68·3	15·80	15·32	2·00	87·61	162·50	283·23
Petite Champagne	3.	69·3	20·77	15·00	1·70	101·58	190·00	329·05
Borderies	4.	68·7	15·72	15·80	1·56	94·80	172·80	300·68
Fins Bois	5.	69	24·35	14·78	1·38	107·13	173·00	320·64
,,	6.	69	23·18	18·18	3·00	86·72	158·56	289·64
Bons Bois	7.	67·6	25·20	37·90	1·85	128·48	168·71	362·14
,,	8.	69·0	31·30	17·38	1·66	122·43	182·00	354·77
,,	9.	69·4	28·80	42·30	1·92	114·40	140·00	327·42
,,	10.	69	20·86	10·52	1·61	96·92	198·75	328·66
,,	11.	70	17·15	17·15	1·66	88·00	195·00	318·96
,,	12.	72·3	43·15	44·44	1·59	72·89	105·10	317·17
,,	13.	71	16·90	24·60	1·20	89·25	170·00	301·95
,,	14.	71	20·50	21·00	1·06	74·36	175·85	292·77
,,	15.	69·3	20·80	8·40	1·36	114·30	130·00	274·86
,,	16.	70	17·14	traces	1·60	88·00	167·50	274·24
Bois à Terroir	17.	68	48·20	40·88	1·55	116·16	145·00	351·79
,,	18.	70·5	18·00	24·00	1·33	105·60	161·00	309·93
,,	19.	69·3	19·62	11·58	1·78	111·74	147·10	291·82
Armagnac	20.	52	46·15	10·00	1·12	128·60	197·30	383·17
Flegmes de betteraves (1906-1907)—								
	1.	90·2	6·65	45·45	—	107·30	150·00	309·40
	2.	88·8	8·10	70·00	—	84·10	132·00	294·20
	3.	80	31·50	33·50	—	33·00	195·00	293·00
	4.	80·2	10·48	38·45	—	70·22	140·00	259·15
Alcools fins d'industrie de provenances diverses—								
	1.	96·1	3·74	—	—	7·32	—	11·06
	2.	96·5	2·23	—	—	8·20	—	10·43
	3.	96·5	2·23	—	—	7·30	—	9·53
	4.	96·5	3·72	—	—	5·47	—	9·19
	5.	95	3·72	—	—	4·63	—	8·41
	6.	96·6	1·86	—	—	5·46	—	7·32
	7.	95·3	3·14	—	—	3·69	—	6·83
	8.	96·8	1·85	—	—	4·54	—	6·39
	9.	96·5	1·85	—	—	2·46	—	4·31
	10.	96·7	2·53	—	—	—	—	2·53

APPENDIX P.

Handed in by Dr. Philip Schidrowitz.

Genuine Cognac Brandies.

(Excepting the alcohol, results are expressed in grams per 100 litres of absolute alcohol).

Age, etc.	Alcohol (per cent.) by vol.	Total Acid.	Non-volatile Acid.	Esters.	"Higher Alcohols."	Aldehyde.	Furfural.
1. *New 1904* - -	61·7	45	5	82	125	8	2·3
2. *New* (still heated by steam coil) - -	56·3	22	4	61	100	3	1·2
3. *5 years old* 1900 vintage	57·7	92	37	125	—	—	—
4. *1875* vintage, pale -	46·7	144	37	177	261	55	1·0
5. *1848* vintage, brown -	38·5	254	109	190	488	32	2·1

APPENDIX Q.

PAPERS HANDED IN BY DR. T. E. THORPE, C.B., F.R.S., Principal of the Government Laboratory.

(I.)

RESULTS OF THE EXAMINATION OF SAMPLES OF SPIRITS referred by Magistrates to the Government Laboratory under the provisions of the Food and Drugs Acts during the years 1889–1908.

WHISKIES.

Year.	From what place.	Charge.	Report.
1889	Stockton	Diluted with water	22·2 U.P. - Not below limit.
1890	West London	"	20·8 " - "
1891	Roscrea	29·0 U.P.	23·5 " - "
1892	Middlesborough	8·6 below legal limit	32·3 " - 7°·3 below limit.
"	Newark	Below 25·0 U.P.	34·4 " - 9°·4 "
1893	Birkenhead	"	29·1 " - 4°·1 "
"	Granard	1·1 grain green copperas per pint	No evidence of copperas.
"	" (2 samples)	?	Genuine whiskey 15·3 U.P.
"	Longford (2 ")	?	" 16·2 "
1894	Templepatrick	Below legal strength	23·5 U.P. - Not below limit.
1895	Nottingham	"	27·8 " - 2°·8 "
"	Perth	"	25·8 " - 0°·8 "
"	Killucan	32° added water	12·2 " - Not "
1896	Eastbourne	6% water beyond 25 U.P.	33·8 " - 8°·8 "
"	Dungannon	27·0 U.P.	22·8 " - Not "
"	Southampton	4% added water	29·2 " - 4°·2 "
1897	Milford Haven	Largely diluted with water	51·0 " - 26°·0 "
1898	Parsonstown	30% U.P.	25·0 " - Not "
"	Hamilton	27° "	25·8 " - 0°·8 "
"	Mountmellick	30·1° "	17·9 " - Not "
"	Kildare	27° "	30·0 " - 5°·0 "
1899	Cavan	28° "	25·5 " - 0°·5 "
1900	Croom	26·2° "	26·5 " - 1°·5 "
1902	Kilkenny	Adulterated with 6·7% water	27·5 " - 2°·5 "
"	Lincoln	Below legal strength	24·8 " - Not "
"	"	"	26·3 " - 1°·3 "
"	"	"	22·7 " - Not "
"	"	"	30·7 " - 5°·7 "
"	Cupar	Contravention of Food and Drugs Act	26·2 U.P. - 1°·2 below limit.
"	Granard	Contains 0·85% extractive, an excessive quantity	0·84% extractive, chiefly sugar. Does not materially alter its commercial character.
1903	Wigtown	Below 25 U.P. standard	26·4 U.P. - 1°·4 below limit.
"	"	" "	26·3 " - 1°·3 "
1904	London (S.W.)	" "	36·4 " - 11°·4 "
"	"	" "	27·0 " - 2°·0 "
"	Dumfries	" "	28·9 " - 3°·9 "
"	Ross and Cromarty	" "	16·1 " - Not "
1905	Granard	Excessive quantity of sugar	0·50% sugar, more than usually found in whiskey.
"	Ballyshannon	Below legal strength	11·7 U.P. - Not below limit.
"	"	"	19·1 " - "
1906	Mansfield	"	28·0 " - 3°·0 below limit.
"	Cork	"	28·5 " - 3°·5 "
"	"	"	17·9 " - Not "
1907	Tyrone	Dilution	24·2 " - " "
"	"	"	24·2 " - " "
1908	Southampton	4·18% excess water	28·6 " - 3°·6 "
"	Newbridge, co. Kildare	33·0 U.P.	37·2 " - 12°·2 "
"	Kirkcudbright	27·13 "	27·0 " - 2°·0 "

Total = 49 samples.

42 For dilution below legal limit.
2 Excessive quantity of sugar or extractive.
1 Adulteration with copperas.
4 As to whether whiskey.

BRANDIES.

Year	From what place.	Charge.	Report.
1893	Havant	4·8% under legal limit of strength	29·9 U.P. = 4·0° below limit.
1895	Clerkenwell	Below legal limit of strength	27·3 „ = 2·3° „
1899	Highgate	Being below proof	27·0 „ = 2·0° „
1903	Newton (N. Wales)	Addition of water and whether whiskey or brandy	31·2 „ = 6·2 „ / 31·3 „ = 6·3 „ / Are brandy.
„	„ „		
1904	Church (Lancs.)	Nature and strength	23·8 U.P. Raw spirit coloured and flavoured.
„	„ „	„ „	21·8 „ „
„	Colne	Adulterated with 70% neutral spirit not derived from grapes	Mixture of pot still grape spirit with about 25% of neutral spirit.
„	Hamilton (Lanark)	Contains 53% of spirit other than grape spirit	Mixture—neutral spirit about 75%.
„	Aberdeen	44% other than grape spirit	Mixture—not less than ½ neutral spirit.
„	Bishop Auckland	77% „	„ „ ¾ „
1905	Seaham Harbour	Is not brandy	„ „ ¾ „
„	Birkenhead	29% other than grape spirit	„ „ ½ „
„	Eccles	70% „	„ „ 15/16 „
„	Durham	35% „	No evidence of other than grape spirit.
„	Lowestoft	Spirit „	30·3 U.P.—5·3° below legal limit: no satisfactory evidence of spirit other than grape spirit.
„	Lonsdale	50% „	Mixture—neutral spirit not less than ⅔ of whole.
„	„ „	60% „	„ „ ⅔ „
„	West Hartlepool	57% „	„ „ ⅔ „
„	Strangeways (Manchester)	65% „	„ „ ⅔ „
„	Fenny Stratford	60% „	„ „ ¾ „
1905	Glasgow	Not of the nature of brandy	Mixture—neutral spirit not less than 23 % of whole.
1907	Durham	Whether properly described as brandy	Do. ⅓ do.
1908	Durham	Contains patent still spirit, only 75 % brandy	Does not afford conclusive evidence of the presence of neutral spirit.
„	Maidenhead	50 % of spirit not derived from grape	40 % of silent spirit—origin unknown. 60 % Cognac brandy.
„	Gainsborough	Dilution	22·8 U.P.—within legal limit.

Total—26 samples.

8 for strength (4 also for character).
18 as to whether genuine brandy.

The estimation of the proportions of neutral or silent spirit in those samples are based on the limits suggested by Girard and Cuniasse of 300 milligrams of total secondary constituents and 80 milligrams of esters per 100 c.c. of absolute alcohol, allowance being made for the small quantities of these substances found in average neutral spirit.

The origin of the neutral spirit was not determined.

Summary of the Results of the Analyses of the above Samples of Brandy.

Year.	From what place.	Strength.		Secondary constituents (Milligrams per 100 c.c. of Absolute Alcohol).					
		Percentage of Proof Spirit.	Percentage of Absolute Alcohol.	Volatile Acid (as Acetic Acid).	Aldehyde (as Acetic Aldehyde).	Esters (as Acetic Ester).	Furfural.	Higher Alcohols French Isobutyl Standard.	Total.
1904	Church (Lancs.)	76·2	43·5	5·3	0·8	52·6	Nil	46·1	104·8
„	„ „	78·2	44·6	5·3	0·7	52·6	Nil	69·5	128·1
„	Colne	102·2	58·3	16·4	3·4	96·5	0·7	109·7	226·7
„	Hamilton (Lanark)	83·3	47·5	23·0	2·3	58·6	0·5	22·1	107·5
„	Aberdeen	84·0	48·0	25·0	7·1	16·7	1·0	93·7	143·5
„	Bishop Auckland	81·0	46·2	22·7	13·0	40·9	2·4	93·0	172·0
1905	Seaham Harbour	84·3	48·1	40·5	13·5	59·5	1·7	114·3	229·5
„	Birkenhead	78·1	44·5	32·9	11·0	44·4	1·8	151·2	241·3
„	Eccles	82·3	47·0	27·0	8·7	23·8	0·8	42·1	102·4
„	Durham	77·0	43·9	27·2	10·3	85·5	1·6	121·4	246·0
„	Lowestoft	69·7	39·8	34·3	11·4	103·7	0·9	128·6	278·9
„	Lonsdale	78·9	45·0	61·6	12·2	51·6	0·7	61·1	187·2
„	„	86·9	49·6	37·8	11·8	55·5	0·8	38·7	144·6
„	West Hartlepool	79·1	45·1	41·6	10·6	62·4	3·3	68·5	186·4
„	Strangeways Manchester	77·8	44·4	38·5	8·4	43·7	0·5	34·9	126·0
„	Fenny Stratford	89·1	50·8	37·4	14·7	33·8	0·9	14·7	101·5
„	Glasgow	79·3	45·2	26·3	15·3	63·6	0·8	27·1	133·1
1907	Durham	76·4	43·6	25·7	13·0	56·5	0·6	102·5	198·3
1908	„	79·0	45·1	23·4	2·5	87·6	2·1	156·9	272·5
„	Maidenhead	78·0	44·5	51·4	17·2	49·8	1·9	38·3	158·6

RUMS.

Year.	From what place.	Charge.	Report.
1891	Marylebone	Contains ginger wine	51·5 U.P. Contains 10 % ginger wine.
1894	Barnard Castle	Deficient in strength	26·9 „ 1°·9 below limit.
1896	Newpallas	Excess water	29·6 „ 3°·6 „
1898	Rathdowney	29·0 U.P.	35·4 „ 10°·4 „
1900	London (S.W.)	34·5 „	36·2 „ 11°·2 „
1901	Thomastown	Addition of water	30·1 „ 5°·1 „
1906	Kensington	Under statutory strength	25·3 „ 0°·3 „

Total—7 samples. 6 for strength.

GINS.

1893	Southwark	37·5% added water	38·0 U.P. 3°·0 below limit.
1894	Clerkenwell	Below legal limit	47·4 „ 12°·4 „
„	Nottingham	Adulterated with water	44·9 „ 9°·9 „
1898	Hastings	4·30 U.P.	35·0 „ Not „
„	Woolwich	Too many degrees under proof	33·2 „ Not „
1903	Southwark	36·8 U.P.	38·0 „ 3°·0

Total = 6 samples all for strength.

(II.)

HIGH-CLASS WHISKIES.

Summary of the Results of the Analyses of Samples supplied by Government Contractors for Hospital use, &c.

No.	Character of Storage.	Age.	Strength. Percentage (by volume).		Extractive Matter. Percentage (grams per 100 c.c.).		Acidity (as Acetic Acid). Grams per 100 c.c.		Secondary constituents. (Milligrams per 100 c.c. of Absolute Alcohol.)					
			As Proof Spirit.	As Abs. Alcohol.	Total Solids.	Ash.	Total.	Volatile.	Volatile Acid (as Acetic Acid).	Aldehydes (as Acetic Aldehyde).	Esters (as Acetic Ester).	Higher Alcohols.	Furfural.	Total.
A/03	Scotch cask	7 years.	89·2	50·90	—	—	·0288	·0144	28·2	9·6	90·0	175·5	2·7	306·0
B/03	„	„	89·1	50·85	—	—	·0288	·0144	28·2	9·6	87·9	175·5	2·7	303·9
C/03	„	„	89·4	51·00	—	—	·0300	·0144	28·2	9·6	90·0	175·5	2·7	306·0
4/04	Irish cask	10 years.	87·3	49·85	·120	·010	—	·0120	24·3	12·1	92·1	877·1	3·5	1009·9
5/04	Scotch cask	„	86·6	49·40	·234	·008	—	·0156	31·5	9·8	93·0	300·0	3·3	437·6
6/04	„	„	85·4	48·75	·194	·010	—	·0168	32·9	9·8	114·0	456·1	3·3	617·1
7/04	„	„	86·0	49·05	·204	·010	—	·0204	41·0	12·1	124·5	578·9	3·1	759·8

(III.)

Summary of the Results of the Analyses and Report on 5 Samples of Spirits from Hong Kong, China, sent by the Governor as representing the Cheap Whiskey made in Germany and commonly sold in licensed premises in the Colony of Hong-Kong.

Forwarded to the Principal of the Government Laboratory by direction of the Secretary of State for the Colonies.

The five samples of spirits forwarded by the Under-Secretary for the Colonies have been examined and the following are the results of the analyses:—

Mark	A	B	C	D	E
Government Laboratory No.	M 127	M 126	M 129	M 130	M 131
Colour	Light Sherry	Light Sherry	Sherry	Dark Sherry	Light Sherry
Flavour	Slight Whiskey	Slight Whiskey	Harsh Spirit	Slight Brandy	Very Slight Whiskey
Strength—					
Percentage of proof spirit	77·2	84·3	82·8	77·3	84·6
Percentage of absolute alcohol	44·0	48·1	47·2	44·1	48·3

Secondary Constituents.

Milligrams per 100 c.c. of absolute alcohol.

Volatile Acidity (as Acetic Acid)	50·7	63·7	10·5	14·0	7·0
Furfural	1·5	1·2	Nil	Nil	Trace
Aldehydes (as Acetic Aldehyde)	1·8	2·1	Trace	Trace	Trace
Esters (as Acetic Ester)	87·5	109·5	15·0	7·8	3·6
Higher Alcohols	225·7	205·4	20·4	22·6	33·2
Total Secondary Constituents	367·2	381·9	45·9	44·4	43·8

From a consideration of these results we are of opinion that samples A and B consist of "patent still" or "silent" spirit with an admixture of genuine "pot still" whiskey for the purpose of imparting the genuine whiskey flavour to the mixture. These samples are very similar to what is usually sold in public-houses in this country as whiskey.

The whiskey would not, of course, be considered of good quality from a commercial point of view, but the total percentages of "fusel oil impurities," and more especially the proportions of furfural and aldehydes present in these samples are considerably less than are generally found in genuine Scotch and Irish "pot still" whiskeys of high commercial quality.

Samples C, D and E are wholly, or almost wholly, composed of "patent" or "silent" spirit diluted, coloured and flavoured to imitate brandy and whiskey.

The "silent" spirit used in concocting these mixtures was highly rectified; and, as will be seen from the results of the analyses, the "fusel oil impurities" in the "whiskey" and "brandy" as sold are very low.

Two of the samples (C & E) are coloured with caramel only, the colouring matter in the other three samples containing also traces of an aniline dye, but both colouring and flavouring matters are used in very minute quantities, and there is no evidence of the presence of any substance not usually found in spirituous drinks of this kind.

These "brandies" and "whiskeys" cannot, therefore, be considered as in any way of a specially deleterious character, and, apart from the quantities consumed, are at least as wholesome as spirits of the same quality sold in this country by publicans and other licensed traders.

Government Laboratory,
26th September, 1904.

(IV.)

RESULTS OF THE ANALYSES AND REPORT ON SAMPLES OF TRADE SPIRITS obtained from the British West African Colonies by direction of the Right Honourable J. Chamberlain, Secretary of State for the Colonies, and sent to Dr. T. E. Thorpe, Principal of the Government Laboratory.

Lab. No.	Colony.	No. and description of Samples.	Strength.		Secondary Constituents. (Milligrams per 100 c.c. of absolute Alcohol.)						Remarks.
			Over or under Proof.	Percentage of absolute alcohol.	Volatile Acid (as Acetic Acid).	Esters (as Acetic Ester).	Aldehydes (as Acetic Aldehyde).	Furfural.	Higher Alcohols.	Total.	
		No.									
M 153	Sierra Leone	Common Absinthe	26·3 U.P.	42·1	8·4	20·8	1·7	Trace	131·2	162·1	Green colour. Aniseed flavour.
154	„	Anisette	56·9 „	24·6	14·7	12·7	1·7	3·5	194·2	226·8	Sweetened. Aniseed flavour.
155	„	Trade Gin	51·1 „	27·9	7·8	383·5	21·0	24·5	315·0	751·8	
156	„	Gin	18·7 „	46·4	15·4	184·7	5·2	14·0	157·5	376·8	
157	„	Trade Rum	43·4 „	32·4	31·5	52·5	8·7	Nil	122·5	215·2	Light brown colour.
158	„	„	13·9 „	49·1	147·0	325·0	29·7	10·5	182·0	694·2	
159	„	„	19·6 „	45·9	47·2	71·7	21·0	1·7	159·2	300·8	Dark brown „
160	„	Gin	28·7 „	40·7	57·7	98·0	12·2	1·7	157·5	327·1	
161	Gambia	1 Rum	14·4 „	48·8	94·5	196·0	61·2	5·2	206·5	563·4	Brown colour.
162	„	2 „	58·8 O.P.	90·6	14·0	31·5	Trace	Trace	61·2	106·7	
163	„	3 „	12·1 „	64·0	98·0	122·5	14·0	„	218·7	453·2	Light brown „
164	„	4 „	6·2 „	60·6	89·2	211·7	7·0	7·0	148·7	463·6	Dark brown „ Sweetened.
165	„	1 Gin	30·1 U.P.	39·9	12·2	119·0	21·0	Nil	175·0	327·2	
166	„	2 „	23·9 „	43·4	10·5	105·0	1·7	1·7	105·0	223·9	
167	„	3 „	29·8 „	40·0	8·7	136·5	8·7	7·0	140·0	300·9	
168	„	4 „	25·1 „	42·7	7·0	56·0	3·5	Trace	157·5	224·0	
169	„	5 „	35·2 „	37·0	5·2	116·2	Trace	Nil	106·7	228·1	
170	„	1 Absinthe	8·1 „	52·4	49·0	82·2	10·5	„	155·7	297·4	Greenish colour. Aniseed flavour.
171	Lagos	1 Green-cases Gin	27·7 „	41·2	7·0	89·2	3·5	3·5	210·0	313·2	
172	„	2 „	25·1 „	42·7	8·7	126·0	21·0	7·0	245·0	407·7	
173	„	3 „	28·8 „	40·6	7·0	120·7	1·7	Trace	248·5	377·9	
174	„	4 „	21·2 „	44·9	8·7	101·5	17·5	1·7	196·0	325·4	
175	„	5 „	30·8 „	39·5	1·7	75·2	26·2	1·7	157·5	262·3	
176	„	6 „	6·8 „	53·2	7·0	71·7	26·2	3·5	210·0	318·4	
177	„	7 Demi-johns Rum	2·8 „	55·5	3·5	141·7	38·5	Trace	140·0	323·7	
178	„	8 „	1·8 „	56·0	3·5	134·7	36·7	„	157·5	332·4	
179	„	9 „	16·2 „	47·8	3·5	143·5	45·5	Nil	180·2	372·7	
180	Lagos	10 Demi-johns Rum	16·6 U.P.	47·6	7·0	141·6	49·0	1·7	140·0	339·3	
181	„	11 „	25·1 „	42·7	5·2	126·0	59·5	Nil	241·5	432·2	
182	„	12 „	15·9 „	48·0	7·0	124·2	71·7	„	252·0	454·9	
183	„	13 Red cases Gin	21·1 „	45·0	5·2	92·7	1·7	5·2	105·0	209·8	
184	„	14 „	18·7 „	46·4	12·2	89·2	14·0	Nil	196·0	311·4	
185	„	15 Puncheons Alcohol	64·6 O.P.	93·9	12·2	141·6	42·0	1·7	84·0	281·5	
186	„	16 „	64·0 „	93·6	15·7	108·5	24·5	3·5	84·0	236·2	
187	„	17 „	45·2 „	82·8	12·2	155·7	35·0	Trace	169·7	372·6	
188	„	18 „	66·0 „	94·7	12·2	215·7	84·0	Nil	210·0	521·9	
189	„	19 Hogsheads Alcohol	66·2 „	94·8	14·0	127·7	19·2	„	60·2	221·1	
190	„	20 Cases „	66·4 „	94·9	3·5	176·7	15·7	„	43·7	239·6	
191	„	21 „ „	57·6 „	89·9	7·0	61·2	10·5	„	66·5	145·2	
192	„	22 Jars „	67·7 „	95·6	5·2	108·5	29·7	„	82·2	225·6	
193	„	23 Pipes—Rum	7·0 U.P.	53·1	22·7	89·2	10·5	1·7	92·7	216·8	
194	„	24 „	18·1 „	46·7	99·7	201·2	22·7	3·5	213·5	540·6	
195	„	25 Paratay Rum	14·2 „	48·9	122·5	250·2	14·0	3·5	210·0	600·2	
196	„	26 Demi-johns aniseed	22·9 „	44·0	10·5	59·5	Trace	Nil	140·0	210·0	Sweetened. Aniseed flavour.
292	Gold Coast, Accra	1 White Gin	17·8 „	46·9	7·0	66·5	15·7	„	190·7	279·9	
293	„	2 „	18·0 „	46·8	7·0	63·0	12·2	„	190·7	272·9	
294	„	3 Rum	3·3 „	55·2	183·7	319·7	14·0	10·5	197·7	725·6	
295	„	4 „	3·3 „	55·2	183·7	321·5	10·5	8·7	197·7	722·1	
296	„	5 „	3·3 „	55·2	77·0	210·0	29·7	14·0	252·0	582·7	
297	„	6 „	3·2 „	55·2	70·0	210·0	28·0	14·0	252·0	574·0	
298	„	7 „	4·2 „	54·7	154·0	348·2	26·2	10·5	182·0	720·9	
299	„	8 „	5·0 „	54·2	134·7	301·5	21·0	8·7	182·0	647·9	
300	„	9 Elephant Gin	18·6 „	46·5	24·5	113·7	3·1	3·5	150·5	295·3	
301	„	10 Prize Medal Gin	18·1 „	46·7	15·7	113·7	3·1	12·2	150·5	295·2	
302	„	11 „	18·4 „	46·6	40·2	91·0	3·1	12·2	192·5	339·0	
303	„	12 „	18·4 „	46·6	35·0	150·5	3·1	12·2	213·5	414·3	

Continued.

Lab. No.	Colony.	No. and description of Samples.	Strength.		Secondary Constituents. (Milligrams per 100 c.c. of absolute Alcohol.)						Remarks.
			Over or under Proof.	Percentage of absolute alcohol.	Volatile Acid (as Acetic Acid).	Esters (as Acetic Ester).	Aldehydes (as Acetic Aldehyde).	Furfural.	Higher Alcohols.	Total.	
		No.									
304	Gold Coast, Accra	13 Elephant Gin -	18·7 U.P.	46·4	24·5	113·7	2·1	1·7	170·5	312·5	
305	„	14 Rum - - -	2·9 „	55·4	119·0	269·5	1·7	10·5	161·0	561·7	
306	Kwitta - -	1 American Rum -	6·3 „	53·5	178·5	348·2	2·9	12·2	224·0	765·8	Straw colour.
307	„ - -	2 Cuba „ -	2·5 „	55·6	52·5	85·7	1·5	1·7	106·7	248·1	Light brown colour.
308	„ - -	4 Australian „ -	66·8 O.P.	95·2	5·2	35·0	Trace	Nil	145·2	185·4	Plain spirit.
309	„ - -	5 Elephant Gin -	19·3 U.P.	46·0	7·0	73·5	2·9	„	238·0	321·4	
310	„ - -	6 Prize Medal Gin -	17·6 „	47·0	10·5	112·0	0·5	14·0	211·7	348·7	
311	„ - -	7 „ -	18·4 „	46·6	7·0	87·5	0·2	12·2	192·5	299·4	

From a consideration of all the tests applied, we are of opinion that the samples marked "alcohol," from Lagos (Laboratory Nos. 185 to 192), as well as those marked "rum," from Gambia (Laboratory No. 162), and "Australian rum," from Kwitta (Laboratory No. 308), consist of strong spirit (spirits of wine), produced by steam distillation. The last sample is the purest and best rectified, and corresponds closely with English "patent still" spirit, the others having more the character of the commoner class of spirit imported from Hamburg and other Continental ports, and mainly used in this country for making methylated spirits and for other industrial purposes rather than in preparing potable liquors.

The samples marked "rum" and "gin" from Sierra Leone, Gambia, Lagos, and the Gold Coast (Laboratory Nos. 157, 159, 160, 163, 168, 169, 173 to 175, 177 to 182, 184, 292, 307 and 309) consist of "patent still" spirits diluted, mixed with traces of artificial flavouring, and in some cases coloured with caramel.

These samples of "rum" and "gin" are factitious, being almost devoid of the special characters of genuine rum and gin. With regard to most of them it may be said that they would scarcely be found in the commonest class of public-houses in this country.

The "gin" and "rum" from Sierra Leone (Laboratory Nos. 155, 156 and 158) and from the Gold Coast (Laboratory Nos. 294, 296 to 298, 301 to 303, 305 and 306, 310 and 311) consist mainly of "pot still" spirits. A few of them are imperfectly rectified, and commercially would be regarded as somewhat crude in character, but all correspond, on the whole, to genuine gin and rum—the samples from the Gold Coast, more especially, being of a fair commercial quality.

The remaining samples of "rum" and "gin" are mixtures of "pot" and "patent" spirit—mostly with a large preponderance of the latter—and are of an inferior commercial quality.

The samples of absinthe, anisette and aniseed from Sierra Leone, Gambia and Lagos (Laboratory Nos. 153, 154, 170 and 196) are diluted "patent" spirit strongly flavoured with aniseed. The spirit is clean and well rectified.

While the great bulk of these samples, considered from a commercial and potable point of view, are of a distinctly inferior class, and have either been imperfectly rectified or have, in some instances, been prepared from crude or residual saccharine materials, naturally yielding a rather harsh spirit, we have not found in any of the samples anything except small quantities of flavouring and colouring matters, in addition to more or less of those bye-products always present to some extent in commercial spirits.

The presence of these bye-products is important as indicative of the general character and mode of manufacture of the spirit, but their total quantity is small, and it is an open question as to what extent the presence of a more than usual proportion of these bye-products may injuriously affect consumers when the spirit is used in strictly limited quantities, or add to the toxic effects when drunk in excess.

Government Laboratory,
7th July, 1897.

(V.)

MEMORANDUM AND REPORT WITH ANALYTICAL DATA OF SAMPLES OF WHISKEY bought in Public Houses in low-class neighbourhoods in certain large towns in England, Scotland and Ireland, and at Fairs and Markets in the West of Ireland.

Complaints having been made that whiskey sold at fairs and markets in certain districts in the West of Ireland was of a deleterious character, the Board of Inland Revenue directed that samples of the whiskey sold at these fairs, and also samples of the whiskey sold in public-houses and by other spirit retailers in the working-class neighbourhoods of the principal towns of England, Scotland and Ireland should be purchased by the Excise officers and sent to the Government laboratory for analysis.

The samples purchased under this order have been received and examined, and the principal analytical and other data are set out in the annexed tables.

From a consideration of these results and of the flavour and general character of the spirits themselves the samples may be classified as follows:—

Character of Spirits.	Nos. of the samples in the annexed tables.			England.	Scotland.	Ireland.	United Kingdom.	Class.
	England.	Scotland.	Ireland.	Number of samples.	Number of samples.	Number of samples	Number of samples.	
Probably entirely Patent Still Spirits	6, 8, 19, 41, 69, 70	33, 55	35, 89, 97, 102, 113, 114, 116, 126	6	2	8	16	A
Patent Still Spirit with not more than 10 per cent. of Pot Still Spirit	3, 4, 13, 14, 15, 16, 17, 25, 26, 27, 32, 39, 40, 42, 67, 68, 81, 84	47, 48, 49, 50, 51, 52, 57, 58, 60, 61, 62, 65, 66, 71, 72	22, 24, 118	18	15	3	36	B
Blends of Patent and Pot Still Spirits containing not more than one-third of the Pot Still	5, 18, 28, 30, 31, 45, 74, 79	56, 63, 64	21, 88, 90, 91, 117	8	3	5	16	C
Blends of approximately equal parts of Patent Still and Pot Still Spirit	9, 11, 29, 73	34, 53, 59	92	4	3	1	8	D
Blends containing approximately three parts Pot Still, one part Patent Still Spirit	10, 12	—	23, 38, 86, 125	2	—	4	6	E
Probably pure Pot Still Spirit	—	—	20, 35, 36, 37, 80, 94, 115, 124, 93 (?)	—	—	9	9	F
	Total - - - - - - -			38	23	30	91	

The only purely pot still spirits are those sold in Ireland, three in Dublin, and the rest in the West of Ireland. Six of these spirits are of fair quality, two (Nos. 35 and 37) are new and raw, and one (No. 93), although giving the analytical data of a pot still spirit, has a peculiar flavour, and is coloured with a coal tar dye and may be factitious.

Nearly all the samples are artificially coloured, the colouring matter in most cases being caramel, but in Nos. 14, 29, 70, 34, 60, 61, 93 and 114, a yellow coal tar colour has been used. The spirits sold as "Irish whiskey" in England and Scotland are, as a rule, more highly coloured than the "Scotch whiskey," and as the great majority of samples are new patent still spirit, with at most a small admixture of pot still spirit as flavouring, the depth of colour is practically the only difference between the cheap grades of "Irish" and "Scotch whiskey" as sold in Great Britain. The whiskey sold in Ireland itself is not usually so highly coloured as spirit sold as "Irish" whiskey in England and Scotland.

Most of the samples appear to have been bought from the stock of spirits being sold to ordinary customers at the public-house bars and retail counters. A few of the samples were bottled spirits with striking labels, but the spirits in these cases were not of higher quality. A sample (No. 33) purchased in Glasgow is described on a gold label as "*Extra Special Old Scotch Whisky—Thoroughly Matured,*" but there can be no doubt that it is, in fact, a new patent still spirit coloured with caramel. Two Irish samples (Nos. 114 and 118) are labelled respectively, "*First Quality Irish Whisky*" and "*Pure Old Irish Whisky—Distilled in Ireland from Home-grown Barley and Malt.*" They are also new patent still spirits, with at most a slight flavouring of pot still spirit.

Eight of the English samples, three of those purchased in Scotland, and six of the Irish samples were found to be under legal limit of strength required by the Food and Drugs Acts. In one or two of these cases the strength was only slightly deficient, but in the majority the strength was from three to six degrees, and in one case more than ten degrees of proof strength below the Food and Drugs Act limit of 25 u.p.

There was not the slightest evidence of the presence of methylated spirits, mineral acids, salt, or any other deleterious ingredient, except in a few cases a minute trace of copper, amounting to from 1/10th to 3/50ths of a milligram. per 100 c.c. This trace of copper is frequently found in pot still spirit, and is no doubt due to the action of the acids in the spirit on the copper stills and condensing worms. The solid matter present consisted mainly of sugar and caramel, and the traces of mineral ash present were evidently derived mainly from the water used in reducing the spirits.

The prices at which the spirits were sold appear to be very similar in all parts of the country—the average being about 2s. 4d. a pint—equivalent to 18s. 8d. per gallon. The duty per gallon at the average strength as sold (77 to 78 per cent. of proof spirit) would be about 8s. 6d., the wholesale price of the spirit, ex duty, would be about 1s. 3d. per gallon for patent still spirit and 2s. 6d. per gallon for pot still, so that the profit and cost of distribution come to about 9s. for patent still spirit and 8s. for pot still spirit. The extra profit the retailer of this kind of spirits can obtain by selling patent still spirit instead of pot still at the same price only amounts to about 1s. per gallon, or 1½d. per pint.

If the working class public cared to pay ½d. per glass more for pot still spirit the publican's profit would be considerably greater, and there appears to be some ground for the statement that working men prefer patent still spirit, or at least that they will not pay anything more for the superior article.

ENGLAND.—*Ordinary Public-House Whiskies.*

No.	Town or District.	Description.	Price per Pint.	Intensity of Colour.	Strength. Percentage (by Volume).		Extractive Matter. Percentage (grams per 100 c.c.).		Acidity (as Acetic Acid). Grams per 100 c.c.		Secondary Constituents (Milligrams per 100 c.c. of Absolute Alcohol).						Class.
					As Proof Spirits.	As Absolute Alcohol.	Total Solids.	Ash.	Total.	Volatile.	Volatile Acid (as Acetic Acid).	Aldehydes (as Acetic Aldehyde).	Esters (as Acetic Ester).	Higher Alcohols.	Furfural.	Total.	
			s. d.														
3	Hull	Scotch	1 6	4	71·4	40·75	·482	·040	·0372	·0096	23·4	19·4	56·1	36·7	0·9	136·5	B
4	,,	Irish	1 6	7	72·0	41·10	·485	·039	·0300	·0066	15·9	4·0	51·3	24·3	0·2	95·7	B
5	,,	Scotch	1 6	3	77·3	44·10	·086	·013	·0096	·0012	2·6	22·5	48·6	113·4	1·4	188·5	C
6	,,	Irish	1 6	7	72·6	41·40	·166	·016	·0030	·0006	1·4	3·5	38·0	24·0	0·1	67·0	A
8	Birmingham	,,	2 0	6	76·5	43·65	·077	·012	·0036	·0012	2·7	4·5	50·0	11·3	0·1	68·6	A
9	,,	Scotch	2 4	5	79·2	45·20	·426	·011	·0216	·0072	15·6	13·1	52·5	177·0	1·5	259·7	D
10	,,	,,	2 2	5	80·0	45·65	·388	·013	·0192	·0078	16·9	9·8	48·1	218·7	1·2	294·7	E
11	,,	,,	2 2	4	79·4	45·35	·442	·014	·0168	·0066	14·5	17·5	46·5	176·2	1·9	256·6	D
12	,,	Irish	2 4	6	78·9	45·05	·134	·005	·0072	·0024	5·2	14·3	39·0	310·5	1·7	370·7	E
13	,,	,,	2 0	5	70·4	40·20	·531	·014	·0156	·0024	5·9	8·0	48·1	49·7	0·5	112·2	B
14	Borough, London	,,	2 4	4	77·3	44·10	·144	·006	·0108	·0012	2·6	6·1	39·9	67·9	0·2	116·7	B
15	,, ,,	Scotch	2 4	2	76·6	43·70	·045	·005	·0096	·0054	12·2	10·6	30·1	45·6	0·7	99·2	B
16	Southwark, London	Irish	2 4	5	76·8	43·85	·177	·028	·0048	·0012	2·6	5·6	48·1	45·5	0·2	102·0	B
17	Borough, London	Scotch	2 4	3	77·2	44·05	·083	·012	·0036	·0012	2·6	7·8	47·6	56·5	0·3	114·8	B
18	Liverpool	,,	2 2	2	83·8	47·85	·086	·006	·0196	·0120	25·1	10·3	55·2	125·3	1·2	217·1	C
19	,,	Irish	2 2	7	79·8	45·55	·361	·010	·0168	·0036	7·8	9·8	38·5	43·7	0·1	99·9	A
25	Lower East Smithfield	Scotch	2 4	2	77·8	44·35	·238	·011	·0096	·0036	8·0	20·1	43·4	78·7	1·4	151·6	B
26	,, ,,	Irish	2 8	5	76·9	43·90	·104	·010	·0036	·0012	2·6	5·0	48·3	68·2	0·2	124·3	B
27	Battersea	Scotch	2 1	4	87·1	49·75	·092	·010	·0084	·0012	2·2	7·0	38·8	60·2	0·1	108·3	B
28	Liverpool	,,	2 4	2	78·5	44·80	·092	·010	·0156	·0078	17·3	15·4	117·7	89·0	1·2	240·6	C
29	,,	Irish	2 2	2	79·5	45·40	·105	·007	·0096	·0030	6·4	7·0	127·9	131·9	2·1	275·3	D
30	,,	,,	2 0	7	76·4	43·60	·283	·026	·0456	·0084	19·0	10·1	48·3	183·2	0·4	261·0	C
31	,,	Scotch	2 2	2	78·6	44·90	·337	·024	·0384	·0060	13·3	15·5	101·8	89·2	1·2	221·0	C
32	Leyton	,,	2 8	4	77·4	44·15	·094	·014	·0012	·0012	2·6	7·8	35·7	46·0	0·5	92·6	B
39	Tooting	Irish	2 8	7	76·0	43·35	·093	·011	·0048	·0006	1·4	5·7	52·6	81·3	0·3	141·3	B
40	Islington	Scotch	2 0	3	73·4	41·90	·243	·016	·0192	·0072	17·1	8·2	41·8	71·4	0·7	139·2	B
41	Goole	,,	2 4	5	78·0	44·50	·088	·013	·0060	·0018	4·0	5·9	47·2	11·2	0·2	68·5	A
42	,,	Irish	2 4	5	74·1	42·25	·076	·008	·0012	·0006	1·4	5·7	70·5	58·9	0·4	136·9	B
45	Hackney	,,	1 10½	3	76·7	43·80	·100	·011	·0036	·0018	4·0	9·9	44·1	113·9	0·8	172·7	C
67	Grimsby	,,	2 1½	6	77·4	44·15	·157	·010	·0048	·0006	1·3	5·9	47·6	85·7	0·2	140·7	B
68	,,	Scotch	2 4	3	79·5	45·40	·078	·012	·0024	·0006	1·3	5·9	42·5	81·4	0·8	131·9	B
69	Shoreditch	Irish	1 10½	4	75·8	43·25	·087	·016	·0024	·0012	2·6	3·3	44·6	80·7	0·1	131·3	A
70	,,	Scotch	2 0	3	76·0	43·35	·105	·013	·0012	·0012	2·6	2·2	34·3	69·0	Nil	108·1	A
73	Hoxton	,,	2 0	2	72·7	41·50	·043	·013	·0036	·0012	2·8	7·1	52·8	192·7	1·4	256·8	D
74	,,	Irish	2 4	4	73·8	42·10	·116	·014	·0012	·0006	1·4	7·0	45·8	151·7	0·4	206·3	C
81	Walthamstow	Scotch	2 8	2	76·0	43·35	·046	·009	·0036	·0018	4·0	6·3	52·7	85·3	0·5	148·8	B
84	,,	Irish	2 8	3	75·4	43·00	·210	·019	·0072	·0018	4·0	5·7	73·6	92·8	0·2	176·3	B
79	,,	,,	3 0	3	77·7	44·30	·118	·008	·0036	·0012	2·6	10·1	43·5	189·4	0·5	246·1	C

SCOTLAND—*Ordinary Public-house Whiskies.*

No.	Town or District.	Description.	Price per Pint.	Intensity of Colour.	Strength. Percentage (by volume.)		Extractive Matter. Percentage (grams per 100 c.c.).		Acidity (as Acetic Acid.) Grams per 100 c.c.		Secondary Constituents. (Milligrams per 100 c.c. of Absolute Alchohol.)						Class.
					As Proof Spirit.	As Absolute Alcohol.	Total Solids.	Ash.	Total.	Volatile.	Volatile Acid (as Acetic Acid).	Aldehydes (as Acetic Aldehyde).	Esters (as Acetic Ester).	Higher Alcohols.	Furfural.	Total.	
			s. d.														
33	Port Dundas	Scotch	3 0	4	79·9	45·60	·052	·004	·0024	·0006	1·2	2·1	30·8	43·7	Nil	77·8	A
34	„	Irish	3 0	7	82·9	47·20	·477	·004	·0108	·0024	5·0	9·8	60·9	126·8	0·5	203·0	D
47	Edinburgh	Scotch	2 6	5	79·0	45·10	·089	·007	·0096	·0042	9·2	23·8	85·7	66·5	0·5	185·7	B
48	„	Irish	3 0	6	82·1	46·85	·141	·008	·0132	·0036	7·5	11·3	37·4	53·3	0·2	109·7	B
49	„	Scotch	1 10½	3	79·2	45·20	·093	·005	·0096	·0036	7·8	11·0	42·7	66·3	0·7	128·5	B
50	„	Irish	2 3	5	78·5	44·80	·139	·006	·0084	·0042	9·2	11·9	35·1	66·8	0·4	123·4	B
51	Leith	Scotch	2 6	4	77·1	44·00	·050	·002	·0036	·0018	4·2	4·3	37·9	49·8	0·4	96·6	B
52	„	Irish	3 0	3	80·7	46·00	·050	·004	·0048	·0012	2·4	23·2	47·6	119·1	0·1	192·4	B
53	Greenock	„	2 4	4	81·0	46·20	·122	·006	·0240	·0084	18·0	17·1	51·2	172·7	1·6	260·6	D
55	Port Glasgow	Irish	2 0	2	71·1	40·65	·040	·005	·0024	·0012	2·8	1·7	38·8	49·1	Nil	92·4	A
56	„	Scotch	2 0	2	74·7	42·65	·049	·006	·0060	·0012	2·8	12·6	49·3	117·0	1·4	183·1	C
57	Glasgow	„	2 0	3	78·5	44·80	·367	·009	·0192	·0036	7·8	12·4	49·0	55·7	0·5	125·4	B
58	„	Irish	2 4	4	79·7	45·50	·127	·006	·0060	·0048	10·5	9·1	38·5	87·6	0·5	146·2	B
59	„	Scotch	2 0	2	83·9	47·90	·091	·007	·0096	·0054	11·2	20·8	62·3	125·3	1·5	221·1	D
60	„	Irish	2 4	4	81·4	46·40	·062	·002	·0024	·0024	5·0	7·8	41·3	86·0	0·2	140·3	B
61	Dundee	Scotch	2 6	3	77·4	44·15	·041	·004	·0012	·0012	2·6	4·9	35·7	90·4	0·5	134·1	B
62	„	„	2 6	3	77·0	43·95	·192	·007	·0060	·0024	3·4	13·4	37·9	68·1	0·5	125·3	B
63	„	„	2 4	3	76·3	43·55	·168	·014	·0120	·0036	8·2	15·9	48·3	96·3	0·5	169·2	C
64	„	Irish	2 4	3	81·9	46·75	·155	·012	·0072	·0036	7·7	7·3	41·3	179·6	0·5	236·4	C
65	„	„	2 4	3	79·2	45·20	·050	·006	·0048	·0024	5·2	6·5	66·0	66·2	0·5	144·4	B
66	„	„	2 4	6	64·6	36·85	·259	·013	·0096	·0012	3·1	5·9	38·1	94·8	0·4	142·3	B
71	Paisley	Scotch	3 0	4	78·4	44·75	·039	·005	·0024	·0012	2·6	2·1	50·9	78·1	0·2	133·9	B
72	„	Irish	3 0	5	76·9	43·90	·064	·008	·0024	·0012	2·6	7·1	48·0	68·2	0·4	126·3	B

IRELAND—*Ordinary Public house and "Fair Day" Whiskies.*

No.	Town or District.	Description.	Price per Pint.	Intensity of Colour.	Strength. Percentage (by Volume).		Extractive Matter. Percentage (grams per 100 c.c.)		Acidity (as Acetic Acid). Grams per 100 c.c.		Secondary Constituents (Milligrams per 100 c.c. of Absolute Alcohol).						Class.
					As Proof Spirit.	As Absolute Alcohol.	Total Solids.	Ash.	Total.	Volatile.	Volatile Acid (as Acetic Acid).	Aldehydes (as Acetic Aldehyde).	Esters (as Acetic Ester).	Higher Alcohols.	Furfural.	Total.	
			s. d.														
20	Caherconlish	Irish	3 0	5	80·6	45·95	—	—	·0120	·0252	54·6	19·4	59·1	347·4	0·8	481·3	F
21	Belfast	„	2 2	4	75·1	42·85	0·254	0·014	·0072	·0048	11·0	14·0	44·9	139·8	1·5	211·2	C
22	„	„	2 2	4	69·2	39·40	0·071	0·008	·0096	·0012	3·0	2·4	37·8	75·9	0·3	119·4	B
23	„	„	2 4	2	70·7	40·35	0·261	0·009	·0096	·0024	5·9	7·3	43·5	197·9	3·8	258·4	E
24	„	„	2 4	5	81·7	46·60	0·070	0·009	·0096	·0016	5·3	3·5	47·6	55·7	0·2	110·3	B
35	Dublin	„	2 4	3	81·2	46·30	0·200	0·012	·0096	·0024	5·0	6·3	41·6	604·3	4·2	661·4	F
36	„	„	2 4	2	82·9	47·30	0·122	0·005	·0120	·0048	9·9	22·7	52·0	592·0	4·2	680·8	F
37	„	„	2 4	2	80·6	45·95	0·055	0·004	·0048	·0024	5·0	37·2	51·4	347·8	1·0	442·4	F
38	„	„	2 4	1	81·3	46·35	0·021	0·004	·0036	·0018	3·8	23·1	43·4	301·7	1·0	373·0	E
80	Athlone	„	2 3	3	80·1	45·70	0·124	0·012	·0156	·0054	11·7	16·1	57·6	437·4	1·2	524·0	F
85	Ballyhaunis, co. Mayo	„	2 6	4	83·0	47·35	0·357	0·029	·0228	·0042	8·9	3·5	29·5	78·0	0·1	120·0	A
86	Sligo	„	2 4	2	78·6	44·90	0·094	0·008	·0024	·0012	2·6	15·5	58·7	312·1	1·7	390·6	E
88	Riverstown, Sligo	„	2 4	3	80·1	45·70	0·040	0·004	·0024	·0012	2·4	5·9	34·4	175·2	0·5	218·4	C
89	„ „	„	2 6	4	69·3	39·50	0·058	0·013	·0048	·0012	2·9	5·4	48·8	75·8	0·1	133·0	A
90	Meenelecky, co. Donegal	„	2 4	3	84·0	47·95	0·099	0·010	·0048	·0018	3·6	9·8	36·5	150·0	0·3	200·2	C
91	Ramelton	„	2 6	5	73·4	41·90	0·792	0·025	·0144	·0048	11·2	6·6	62·9	107·4	0·8	188·9	C
92	Cloughjordan, Birr	„	2 4	4	83·5	47·65	0·464	0·014	·0128	·0030	6·1	6·3	53·3	188·7	0·5	254·9	D
93	Kanturk	„	2 4	5	90·6	51·70	0·280	0·018	·0348	·0102	19·6	24·7	71·5	649·8	1·7	767·3	F
94	„	„	2 4	4	81·2	46·30	0·668	0·019	·0168	·0036	7·7	13·6	37·8	431·6	3·3	494·0	F
97	Ennis	„	3 4	4	80·2	45·75	0·135	0·008	·0024	·0024	5·2	8·0	69·2	80·8	0·1	163·3	A
102	Mountcharles, Donegal	„	2 4	1	87·5	49·95	0·014	0·003	·0216	·0012	2·2	4·3	43·9	90·0	0·1	140·5	A
114	Cappa White, Clonmel	„	2 6	4	81·4	46·40	0·059	0·003	·0024	·0012	2·4	4·7	33·9	32·2	0·1	73·3	A
115	Knocklong, Limerick	„	2 4	4	71·0	40·55	0·094	0·029	·0024	·0006	1·4	17·1	54·2	444·2	1·9	518·8	F
116	Manorhamilton, Leitrim	„	2 0	5	83·2	47·45	0·046	0·010	·0084	·0012	2·4	2·4	40·6	56·7	Nil	102·1	A
117	Feakle, Clare	„	3 6	3	72·9	41·65	0·247	0·027	·0228	·0048	11·3	8·4	42·2	108·1	0·3	170·3	C
113	Crossmolina, Westport	„	1 8	3	79·2	45·20	1·019	0·033	·0048	·0048	10·5	4·7	35·0	44·1	0·3	94·6	A
124	Listowel	„	2 3	3	84·3	48·15	0·119	0·014	·0228	·0090	18·5	18·2	65·6	415·2	2·1	519·6	F
125	Clifden	„	2 6	3	77·5	44·20	0·058	0·007	·0216	·0042	9·4	14·3	47·6	316·0	0·8	388·1	E
126	Manulla, co. Mayo	„	2 8	6	77·1	44·00	0·077	0·011	·0084	·0012	2·6	4·9	57·9	45·3	0·1	110·8	A
118	Frankfort, King's co.	„	1 9	3	79·6	45·45	0·057	0·005	·0036	·0012	2·6	3·6	42·5	61·4	0·5	110·6	B

(VI., VII., & VIII.)

"POT STILL" AND "PATENT STILL" SPIRITS.

EXAMINATION OF SAMPLES

Obtained from Distilleries and Distillery Warehouses in England, Scotland and Ireland.

An examination of the following tables giving the results of the analyses of a number of representative samples of both kinds of spirits shows very clearly the broad distinction between the "pot still" and "patent still" spirit. There is always a much larger amount of the secondary constituents in the "pot still" spirit.

Speaking generally, the percentage of every one of the secondary constituents usually determined is greater in the "pot" than in the "patent" spirit, but the most marked differences are in the "higher alcohols" and "furfural." "Patent" spirit contains no furfural when new, although after storage in wooden casks it is sometimes found to contain traces of this substance, but always in much smaller amount than in "pot still" spirit, in which it is never absent. The low percentage of "higher alcohols" and the absence of all but mere traces of furfural render it a comparatively easy matter to distinguish "patent" from "pot still" spirit. But the variation in the amounts of the secondary constituents in both classes of spirits renders it less easy to estimate the exact proportion of each kind of spirit present in mixtures. Comparing the "pot still" whiskeys among themselves, it will be observed that there are considerable variations in both the total amount and in each constituent of the secondary bodies. The Scotch whiskeys generally show a somewhat less total amount than the Irish, and the Speyside, Banffshire and Highland samples have a rather smaller amount than the Islay and Campbelltown samples. The latter, as well as most of the Irish samples, are mainly "blending," as distinguished from "self" whiskeys.

The differences between new and old "pot still" whiskeys, so far as shown by analysis, are mainly in the increased amounts of the volatile acids and aldehydes, and to a less extent of the esters found in the old spirit when stored in wooden casks. The "higher alcohols" and furfural appear to remain very much the same. Any changes that occur in "patent" spirit are of a similar kind.

"Pot still" whiskey is almost always stored in sherry casks, or in other well-seasoned wooden casks that have formerly contained similar spirit. A large proportion of the increases in the secondary constituents which occurs in spirit stored in such casks takes place in the first few months and is due to a process of extraction of these products absorbed in the wood of the casks from former spirits. This absorption is to some extent selective. The ethyl alcohol slowly diffuses through the wood of the cask and passes into the air, leaving some of the esters and higher alcohols behind in the wood, which thus becomes more or less charged with the secondary constituents, according to the length of time and other circumstances attending the storage in the duty free warehouse.

Probably also, especially when the casks are empty, there is some production of acids, aldehydes, and esters by the slow oxidation of the alcohols in, and adhering to the wood of the casks.

A comparison of the ordinary "patent" spirits with the "spirits of high strength"—British and foreign—which are not usually stored in wooden casks but in metal drums or vats, shows that the latter spirits contain still less of the secondary constituents, and that the slight changes which occur in ordinary "patent" spirits do not take place in these high strength spirits. These spirits are used mainly for technical and industrial purposes, and are often of very great purity although made from molasses, potatoes and beetroot sugar residues, or other materials not employed in making spirits intended for consumption in this country.

Brandy and rum are not produced in this country, and we cannot give the results of the analyses of many samples whose origin is well authenticated.

But a good deal of information on these liquors can be obtained from data published in the scientific journals and otherwise.

For Brandy.—The tables given in Girard and Cuniasse—*Analyse des Alcools*—are the most authoritative as to its composition. From these tables it will be seen that brandy, like pot still whiskey, varies considerably in both the total of the secondary constituents, and in each of the separate constituents.

For Rum.—A number of analyses of genuine Jamaica rum are given in the "Journal of the Society of Chemical Industry," Vol. 26, No. 10, p. 498, March, 1907.

The principal feature of these rums is the large percentage of esters usually present, and also the great variations in the amount of this constituent. I have reason to believe that the variations shown in this paper are by no means extreme. It will be observed that Jamaica rums are divided, like pot still whiskies, into *drinking* and *blending* rums. Jamaica's best customers for the latter are, I understand, the Hamburg blenders, who prepare artificial rum by mixing with neutral spirit a proportion of Jamaica *blending* or "Flavoured Rum." The rums from other West Indian Islands and colonies contain less esters, and in many cases are produced by "patent" stills.

Gin is practically all made in this country from highly rectified patent spirit flavoured with juniper and other ingredients and more or less sweetened. In Holland a certain amount of gin is made by flavouring the wash or low-wines and is distilled in pot stills. Some of these gins are given in Table IV. among the West African spirits.

(VI.)

SPIRITS FROM POT STILL DISTILLERIES.

No.	Character of Storage.	Age.	Strength. Percentage (by volume).		Extractive Matter. Percentage (grams per 100 c.c.).		Acidity (as Acetic Acid). Grams per 100 c.c.		Secondary Constituents (Milligrams per 100 c.c. of Absolute Alcohol).						District.	No.
			As Proof Spirit.	As Absolute Alcohol.	Total Solids.	Ash.	Total.	Volatile.	Volatile Acid (as Acetic Acid).	Aldehydes (as Acetic Aldehyde).	Esters (as Acetic Ester).	Higher Alcohols.	Furfural.	Total.		
103	Spirit Store Vat	New	111·8	63·8	·0040	·0020	·0108	·0108	16·9	9·2	77·4	407·2	2·9	513·6	Speyside	103
104	Cask 2246/02	6 years	106·7	60·9	·1160	·0080	·0360	·0318	52·2	19·6	93·9	472·1	1·9	639·7	„	104
109	Store Vat	New	111·5	63·6	·0030	·0010	·0084	·0084	13·2	5·4	62·2	471·4	2·9	555·1	Banffshire	109
110	Cask	7 years	105·8	60·4	·1850	·0180	·0456	·0324	53·6	32·2	91·0	371·4	1·9	550·1	„	110
41	„	New	110·9	63·3	—	—	—	·0060	9·8	9·8	63·1	490·0	2·8	575·5	„	41
123	Cask in Spirit Store	„	111·5	63·6	·0038	·0017	·0096	·0096	15·0	21·8	63·8	451·6	4·2	556·4	—	123
122	Plain Wood Cask	7 years	104·6	59·7	·0257	·0060	·0216	·0180	30·1	41·6	92·0	460·5	3·6	627·8	Islay	122
121	Sherry Wood Cask	„	105·0	60·0	·1512	·0150	·0384	·0276	46·0	43·2	99·0	563·2	3·6	755·0	—	121
111	Cask in Spirit Store	New	110·9	63·2	·0045	·0025	·0108	·0108	17·0	33·6	72·9	410·9	3·5	537·9	—	111
112	Plain Wood Cask	4 years	106·4	60·7	·0758	·0057	·0264	·0228	37·5	34·8	81·4	453·0	3·3	610·0	Campbeltown	112
100	Cask	10 years	111·2	63·5	—	—	—	·0270	47·3	10·0	98·8	322·8	5·7	484·6	Highland	100
105	Cask in Spirit Store	New	125·5	71·6	·0020	·0013	·0024	·0024	3·3	50·2	102·8	522·6	3·1	682·0	Irish	105
106	Sherry Wood Cask	6 years	115·9	66·1	·1509	·0144	·0336	·0216	32·6	55·9	86·4	771·2	2·9	949·0	„	106
375	Spirit Store	New	152·3	86·9	—	—	—	·0015	1·7	26·3	73·7	861·4	2·2	965·3	„	375
376	„	„	151·7	86·6	—	—	—	·0015	1·7	8·7	73·0	729·8	0·1	813·3	„ Special Distillation	376
370	Cask	8 years	116·8	66·6	—	—	—	·0120	17·5	10·5	30·0	894·7	3·1	955·8	„	370
354	„	New	125·4	71·6	—	—	—	·0024	4·2	7·0	13·6	701·7	1·1	727·6	—	354
353	„	6 years	115·2	65·7	—	—	—	·0144	21·0	12·2	35·0	789·0	1·4	858·6	„	353
323	„	New	125·0	71·3	—	—	—	·0012	1·4	4·6	75·9	336·9	Nil	418·8	„ Special Distillation	323
324	„	1 year	123·7	70·6	—	—	·0048	·0036	5·2	7·0	106·6	571·9	„	690·7	„	324
424	„	New	124·0	70·8	·068	·0010	—	·0012	1·4	11·5	46·1	857·9	8·5	925·4	„	424

(VII.)

SPIRITS FROM PATENT STILL DISTILLERIES.

No	Character of Storage.	Age.	Strength. Percentage (by volume).		Extractive Matter. Percentage (grams per 100 c.c.).		Acidity (as Acetic Acid). Grams per 100 c.c.		Secondary Constituents (Milligrams per 100 c.c. of Absolute Alcohol).						District.	No.
			As Proof Spirit.	As Absolute Alcohol.	Total Solids.	Ash.	Total.	Volatile.	Volatile Acid (as Acetic Acid).	Aldehydes (as Acetic Aldehyde).	Esters (as Acetic Ester).	Higher Alcohols.	Furfural.	Total.		
98	Spirit Store Vat	New	112·0	63·9	·002	·001	·0012	·0012	1·9	9·6	30·8	39·0	Nil	81·3	Scotch Distillery	98
99	Plain Wood Cask	7 years	99·4	56·7	·029	·003	·0120	·0108	19·0	10·8	35·0	21·8	0·1	86·7	,,	99
100	Sherry Wood Cask	,,	108·2	61·7	·424	·016	·0360	·0228	36·9	12·0	47·9	20·1	0·3	117·2	,,	100
107	Store Vat	New	112·0	63·9	·003	·002	·0012	·0012	1·9	4·7	41·1	97·8	Nil	145·5	,,	107
108	Plain Wood Cask	4½ years	107·6	61·4	·021	·003	·0096	·0096	15·6	14·1	46·4	81·3	,,	157·4	,,	108
326/01	Cask	New	108·6	62·0	—	—	—	·0022	3·8	Trace	22·8	14·0	,,	40·6	,,	326/01
329/01	,,	3 months	111·2	63·5	—	—	—	·0030	5·2	,,	45·6	42·0	,,	92·8	,,	329/01
372/05	,,	New	122·4	69·8	—	—	—	·0024	3·5	,,	12·2	28·0	,,	43·7	Irish Distillery	372/05
371/05	,,	7 years	103·4	59·0	—	—	—	·0240	40·0	3·3	22·8	57·8	0·3	124·2	,,	371/05

(VIII.)

BRITISH AND FOREIGN SPIRITS OF HIGH STRENGTH.

No.	Description.	Strength. Percentage (by volume).		Extractive Matter. Percentage (grams per 100 c.c.).		Acidity (as Acetic Acid). Grams per 100 c.c.		Secondary Constituents (Milligrams per 100 c.c. of Absolute Alcohol).						No.
		As Proof Spirit.	As Absolute Alcohol.	Total Solids.	Ash.	Total.	Volatile.	Volatile Acid (as Acetic Acid).	Aldehydes (as Acetic Aldehyde).	Esters (as Acetic Ester).	Higher Alcohols.	Furfural.	Total.	
141	British Spirit from Molasses	167·6	95·7	·006	·005	·0006	·0006	1·2	35·1	62·5	84·0	Nil	182·8	141
142	British Spirit from Grain, highly rectified	166·6	95·0	·014	·010	·0006	·0006	1·2	Trace	11·1	21·2	,,	33·5	142
143	British Spirit from Molasses, highly rectified	167·8	95·8	·003	·002	·0006	·0006	1·2	3·5	7·3	63·0	,,	75·0	143
144	British Spirit crude, from Molasses	169·2	96·6	·005	·003	·0012	·0012	2·5	97·3	187·7	20·9	,,	308·4	144
145	Foreign Spirit Imported from Hamburg	168·0	95·9	·015	·010	·0006	·0006	1·2	Nil.	5·5	10·4	,,	17·1	145
146	Foreign Spirit Imported from Hamburg	168·8	96·4	·012	·009	·0006	·0006	1·2	Nil.	9·1	20·9	,,	31·2	146
147	Foreign Spirit Imported from Stettin	169·0	96·5	·014	·008	·0006	·0006	1·2	2·2	7·2	83·7	,,	94·3	147

EXPERIMENTS RELATING TO THE CHANGES OCCURRING IN "POT STILL" SPIRITS DURING STORAGE IN WOODEN CASKS AND GLASS BOTTLES.

IX., X., and XI.—The results of the analyses shown in the following tables refer to four casks of spirits stored in distillery warehouses from which samples were periodically drawn and sent to the Government laboratory.

The changes shown by these experiments in the secondary constituents of the spirit are not great.

In all four casks there was a fairly well-marked increase during the first six months' storage in every one of the secondary constituents over the amounts found in the new spirits. After nine to twelve months' storage the "higher alcohols" and the "furfural" remained practically constant, and the increases in the other constituents were very slow. Indeed, after storage for a year or eighteen months all the differences shown are practically within the limits of experimental error.

Practically no change occurs in spirits stored in glass bottles.

The fact that the changes in the secondary constituents of whiskey are of comparatively limited range, even on storage in wooden casks, and practically negligible in glass bottles, is of considerable importance in enabling spirits to be traced and identified; or, on the other hand, to show conclusively that they are quite different from what they are alleged to be.

A series of tables respecting the changes undergone by spirits during storage in wooden casks in America is given in the "American Chemical Society Journal," Vol. XXX. (1), p. 99, January, 1908.

The use of "charred wood" casks and the temperatures of storage are very different from the conditions obtaining in this country, but practically the American results point in the same direction as those given in the annexed tables.

(IX.)

CHANGES IN SPIRITS DURING STORAGE IN WOODEN CASKS.

(Spirits drawn at intervals from same cask in each series.)

No.	Character.	Age.	Strength. Percentage (by Volume).		Colour.	Extractive Matter. Percentage (grams per 100 c.c.).		Acidity (as Acetic Acid). Grams per 100 c.c.		Secondary Constituents (Milligrams per 100 c.c. of Absolute Alcohol).							No.
			As Proof Spirit.	As Absolute Alcohol.		Total Solids.	Ash.	Total.	Volatile.	Volatile Acid (as Acetic Acid).	Aldehydes (as Acetic Aldehyde).	Esters (as Acetic Ester).	Higher Alcohols.	Furfural.	Total.		
352	1901 Pot Still Spirit - -	New S.R. - -	120·5	68·70	Nil to Faint Sherry.	—	—	·0144	·0096	14·0	3·0	41·7	321·0	Nil	379·7	Series A. Special Distillation.	352
87	Cask 173/01 - - -	6 months in Cask	110·3	63·00		—	—	·0142	·0090	14·2	4·0	44·7	350·8	0·3	414·0		87
278	" - - -	1 year " -	110·1	62·85		—	—	·0140	·0110	17·5	4·0	44·8	350·8	0·3	417·4		278
68	" - - -	1½ years " -	109·5	62·50		—	—	—	·0110	17·5	4·0	43·9	352·6	0·3	418·3		68
314	" - - -	2 " " -	108·7	62·05		—	—	—	·0110	17·7	4·0	43·9	368·4	0·3	434·3		314
73	" - - -	2½ " " -	108·3	61·75		·0195	·0032	—	·0110	17·8	4·0	43·8	368·4	0·3	434·3		73
198	" - - -	3 " " -	106·8	60·95		·0241	·0032	—	·0110	18·0	4·0	41·2	366·6	0·3	430·1		198
433	" - - -	4 " " -	105·7	60·25		·0266	·0042	—	·0110	18·2	4·0	43·9	368·4	0·3	434·8		433
137	" - - -	5 " " -	104·8	59·80		·0295	·0037	—	·0110	18·4	4·6	43·9	374·9	0·3	442·1		137
261	" - - -	6 " " -	105·0	59·90		·0303	·0034	—	·0110	18·4	5·2	40·0	385·9	0·3	449·8		261
171	" - - -	6½ " " -	104·1	59·40		·0332	·0036	—	·0110	18·5	5·5	47·5	375·0	0·3	446·8		171
355	1908 " - - -	7 " " -	103·8	59·20		·0360	·0028	—	·0110	18·5	6·0	47·5	375·0	0·3	447·3		335
378	1901 Pot Still Spirit - -	New Store Cask	111·5	63·65	Nil to Faint Sherry.	—	—	·0120	·0084	13·1	21·8	65·9	252·6	3·3	356·7	Series B. Ordinary distillation.	378
100	Cask 168/01 - - -	6 months in Cask	111·3	63·55		—	—	·0140	·0096	15·0	24·9	66·1	266·6	3·5	375·1		100
277	" - - -	1 year " -	110·7	63·20		—	—	·0140	·0100	15·8	25·1	66·8	285·9	3·5	397·1		277
67	" - - -	1½ years " -	110·3	63·00		—	—	—	·0100	15·8	27·0	64·8	286·0	3·5	397·1		67
313	" - - -	2 " " -	109·7	62·65		·0160	·0022	—	·0100	15·8	27·0	75·4	266·6	3·5	388·3		313
72	" - - -	2½ " " -	109·0	62·20		·0171	·0028	—	·0100	16·0	27·5	69·1	258·0	3·5	374·1		72
197	" - - -	3 " " -	107·7	61·40		·0189	·0030	—	·0106	17·2	27·1	74·2	258·0	3·5	380·0		197
432	" - - -	4 " " -	107·3	61·20		·0209	·0053	—	·0096	15·8	31·5	78·9	258·0	3·5	387·7		432
138	" - - -	5 " " -	106·6	60·80		·0225	·0027	—	·0096	15·8	36·8	77·2	258·0	3·5	391·3		138
260	" - - -	6 " " -	106·6	60·80		·0245	·0027	—	·0096	15·8	36·8	78·2	254·4	3·5	388·7		260
170	" - - -	6½ " " -	105·7	60·25		·0259	·0033	—	·0096	15·8	36·8	82·4	263·1	3·5	401·6		170
354	1908 " - - -	7 " " -	105·6	60·20		·0265	·0031	—	·0096	15·8	36·8	82·4	258·0	3·5	396·5		354

(X.)

CHANGES IN WHISKEY DURING STORAGE IN WOODEN CASKS.

(The spirits were drawn from same cask in each series.)

No.	Character.	Age.	Strength. Percentage (by volume).		Colour.	Extractive matter. Percentage (grams per 100 c.c.).		Acidity (as Acetic Acid). Grams per 100 c.c.).		Secondary Constituents. Milligrams per 100 c.c. of Absolute Alcohol.							No.
			As Proof Spirit.	As Abs. Alcohol.		Total Solids.	Ash.	Total.	Volatile.	Volatile Acid (as Acetic Acid).	Aldehydes (as Acetic Aldehyde).	Esters (as Acetic Ester).	Higher Alcohols.	Fur-fural.	Total.		
15	Pot Still Spirit 1902	New. S.R.	120·2	68·60	Nil to Faint Sherry	...	...	·0120	·0096	14·0	7·5	46·3	245·6	Nil	313·4	Series C—Special Distillation	15
82	„	6 months in Cask	111·5	63·65		...	...	·0120	·0090	14·0	12·2	60·0	317·5	Nil	393·7		82
292	„	9 „	111·4	63·60		...	...	·0130	·0100	15·8	21·2	47·4	350·8	0·1	435·3		292
76	„	1¼ years	111·3	63·55		...	...	...	·0100	15·8	21·2	49·1	350·8	0·1	437·0		76
327	„	1¾ „	111·0	63·35		...	...	...	·0100	15·8	21·2	47·4	350·8	0·1	435·3		327
86	„	2¼ „	110·6	63·15		...	...	...	·0100	15·8	21·2	47·4	350·8	0·1	435·3		86
265	1905 „	2¾ „	110·4	63·05		...	...	...	·0110	17·5	22·8	54·4	352·6	0·1	447·4		265
14	Pot Still Spirit 1902	New. S.R.	120·0	68·45	Nil to Faint Sherry	...	...	·0120	·0084	12·2	3·1	47·5	228·0	3·5	294·3	Series D—Ordinary Distillation	14
81	„	6 months in Cask	110·3	63·00		...	...	·0120	·0084	13·3	3·8	49·0	317·5	3·5	387·1		81
291	„	9 „	110·0	62·75		...	...	·0140	·0084	13·4	5·8	50·0	350·8	3·5	423·5		291
75	„	1¼ years	110·0	62·75		...	...	...	·0090	14·4	5·8	45·7	350·8	3·5	420·2		75
326	„	1¾ „	110·0	62·75		...	...	...	·0100	15·8	5·8	42·1	350·8	3·5	418·0		326
85	„	2¼ „	109·2	32·30		...	...	...	·0100	15·8	5·8	47·4	352·6	3·5	425·1		85
264	1905 „	2¾ „	108·9	62·15		...	...	...	·0100	15·8	5·8	45·7	352·6	3·5	423·4		264

(XI.)

STORAGE OF SPIRITS IN GLASS BOTTLES.

No.		Strength. Percentage (by volume).		Secondary Constituents (Milligrams per 100 c.c. of Absolute Alcohol).					
		As Proof Spirit.	As Absolute Alcohol.	Volatile Acid (as Acetic Acid).	Aldehydes (as Acetic Aldehyde).	Esters (as Acetic Ester).	Higher Alcohols.	Furfural.	Total.
291	Original analysis - - -	110·0	62·75	13·4	5·8	50·0	350·8	3·5	423·5
	After 2¼ years in bottle -	109·1	62·25	10·3	5·7	60·3	353·4	3·3	433·1
75	Original analysis - - -	110·0	62·75	14·4	5·8	45·7	350·8	3·5	420·2
	After 1¾ years in bottle -	108·9	62·15	13·0	5·7	43·7	353·8	3·3	419·5
326	Original analysis - - -	110·0	62·75	15·8	5·8	42·1	350·8	3·5	418·0
	After 1¾ years in bottle -	108·9	62·15	15·4	5·7	39·3	353·8	3·3	417·5
85	Original analysis - - -	109·2	62·30	15·8	5·8	47·4	352·6	3·5	425·1
	After ¾ year in bottle - -	108·5	61·90	13·0	5·7	44·0	355·6	3·3	421·6
264	Original analysis - - -	108·9	62·15	15·8	5·8	45·7	352·6	3·5	423·4
	After ¾ year in bottle - -	108·5	61·90	15·5	5·7	44·0	355·6	3·3	424·1
292	Original analysis - - -	111·4	63·60	15·8	21·2	47·4	350·8	0·1	435·3
	After 2¼ years in bottle -	109·9	62·75	22·8	21·2	63·6	351·0	0·1	458·7
76	Original analysis - - -	111·3	63·55	15·8	21·2	49·1	350·8	0·1	437·0
	After 1¾ years in bottle -	109·5	62·50	15·3	21·2	46·5	352·1	0·1	435·2
327	Original analysis - - -	111·0	63·35	15·8	21·2	47·4	350·8	0·1	435·3
	After 1¼ years in bottle -	110·4	63·05	12·8	21·2	48·4	349·2	0·1	431·2
86	Original analysis - - -	110·6	63·15	15·8	21·2	47·4	350·8	0·1	435·3
	After ¾ year in bottle - -	110·0	62·75	15·3	19·3	46·3	382·5	0·1	463·5
265	Original analysis - - -	110·4	63·05	17·5	22·8	54·4	352·6	0·1	447·4
	After ¼ year in bottle - -	109·5	62·50	16·3	23·4	54·1	384·2	0·1	478·1
72	Original analysis - -	109·0	62·2	16·0	27·5	69·1	258·0	3·5	374·1
	After 3¾ years in bottle -	103·9	59·3	16·1	30·2	63·2	242·9	3·5	355·9
432	Original analysis - -	107·3	61·2	15·8	31·5	78·9	258·0	3·5	391·3
	After 2¾ years in bottle -	107·1	61·1	15·5	35·8	78·6	235·5	3·5	368·9
157	Original analysis - -	106·6	60·8	15·8	36·8	77·2	258·0	3·5	391·3
	After 1¾ years in bottle -	106·6	60·8	15·7	36·9	77·1	236·7	3·5	369·9
170	Original analysis - -	105·7	60·3	15·8	36·8	82·4	263·1	3·5	401·6
	After 1¾ years in bottle -	105·3	60·1	15·9	36·7	82·0	239·5	3·5	377·6
354	Original analysis - - -	105·6	60·2	15·8	36·8	82·4	258·0	3·5	396·5
	After ¾ year in bottle - -	105·3	60·1	15·9	36·7	82·0	257·2	3·5	395·3
73	Original analysis - -	108·3	61·75	17·8	4·0	43·8	368·4	0·3	434·3
	After 3¾ years in bottle -	107·7	61·40	16·8	6·8	41·8	361·0	0·3	426·7
198	Original analysis - -	106·8	61·00	18·0	4·0	41·2	366·6	0·3	430·1
	After 2¾ years in bottle -	105·8	60·40	17·1	7·0	38·8	335·8	0·3	399·0
433	Original analysis - -	105·7	60·30	18·2	4·0	43·9	368·4	0·3	434·8
	After 2¾ years in bottle -	105·2	60·00	17·3	7·1	42·8	337·5	0·3	405·0
138	Original analysis - -	104·8	59·80	18·4	4·6	43·9	374·9	0·3	442·1
	After 1¾ years in bottle -	104·8	59·80	18·4	7·3	43·0	374·5	0·3	443·5
355	Original analysis - - -	103·8	59·20	18·5	6·0	47·5	375·0	0·3	447·3
	After ¼ year in bottle - -	103·3	58·90	20·3	7·3	43·4	343·6	0·3	444·9
171	Original analysis - - -	104·1	59·40	18·5	5·5	47·5	375·0	0·3	446·8
	After 1¾ years in bottle -	103·9	59·30	18·7	7·3	43·4	377·8	0·3	447·5

The bottles when set aside contained the remainder of the samples in the storage experiments IX. and X. (q.v.) and were in all cases more than half empty. The conditions were, therefore, more favourable to oxidation changes than if the bottles had been full.

(XII.)

The Examination of Commercial Spirits and Methods of Estimating the Secondary Constituents.

Total Acidity.—50 c.c. of the sample are titrated with decinormal soda or baryta, using a drop of phenolphthalein solution as indicator.

Volatile Acidity.—Another portion of 50 c.c. is evaporated in a beaker to near dryness over a steam bath, about 25 c.c. of distilled water added, and the solution again evaporated. The residue is then dissolved in about 25 c.c. of cold, recently boiled, distilled water and titrated with decinormal soda or baryta as before. The difference between the value so ascertained and that obtained in the previous experiment is a measure of the volatile acid, which, as well as the total acid, is expressed in terms of acetic acid as grams per 100 c.c. of the sample.

Total Solids and Ash.—100 c.c. of the sample, or the residue left in the distilling flask from the distillation test mentioned below, are evaporated to dryness in a tared capsule, dried in a steam oven at 100°C., and weighed after cooling in a desiccator. The residue is then ignited at a dull red heat, and when only a white ash remains the capsule is cooled and weighed. The solids and ash thus determined are expressed in grams per 100 c.c. of the sample. The ash is examined for the presence of lead, copper, iron, etc., and if necessary, the amount of such substances present estimated by suitable means.

Commercial spirits are often slightly sweetened and coloured, usually with caramel. Sometimes the colouring used contains a coal tar dye. The presence of an artificial dye of this kind can generally be determined by dyeing a fragment of white Berlin wool, and the sugar present is estimated, if necessary, in the usual way with Fehling's solution.

Most commercial spirits, and especially potable spirits such as whiskey, brandy, rum, etc., contain various colouring and other matters extracted from the casks in which they have been stored. Before the tests described below can be applied, it is necessary, therefore, to free the spirit by re-distillation from all extraneous colouring or extractive matter added to it, or derived from the cask. This practice is also advisable even where the spirit appears to be colourless.

The density and apparent strength of the sample as it stands having been ascertained, a measured quantity (120 to 150 c.c. or more according to strength) is placed in a glass flask and diluted to nearly 200 c.c. with distilled water. The flask is connected by good india-rubber corks and a bent glass tube with a spiral condenser, and the contents gently distilled to as near dryness as possible without charring the residue. The distillate is made up to 200 c.c., and the strength ascertained as before. The quantity taken for distillation should be such that the distillate will contain about 50 per cent. of absolute alcohol (87·5 per cent. of proof spirit).

Examination of Distillate.

Acidity.—50 c.c. are titrated with decinormal soda solution, using a drop of phenolpthalein as indicator. The acid is calculated as acetic (c.c.'s of decinormal soda × ·006 × 2 = acetic acid in grams per 100 c.c. of distillate). The estimation of the acidity of the distillate is a necessary preliminary to the estimation of the esters. The acidity of the distillate is usually slightly less than the total volatile acid as determined in the sample before distillation.

Esters.—The 50 c.c. from the acidity test are transferred to a screw-stoppered silver pressure flask, washing once or twice with a few c.c.'s of cold, recently boiled, distilled water. 20 c.c. of decinormal soda are then added, and the flask is heated for two hours on the steam bath. After cooling, the contents of the flask are washed with distilled water into a beaker and titrated with decinormal sulphuric acid. (The c.c.'s of decinormal soda used up in the saponification × 2 × ·0088 = grams of Ester (as ethyl acetate) per 100 c.c. of distillate.)

Furfural.—A standard solution is made up containing 1 gram of furfural in 100 c.c. of pure spirit of 50 per cent. strength, and from this, other standard solutions are prepared containing 0·1, 0·01, and 0·001 grams respectively of furfural per 100 c.c. in similar spirit.

10 c.c. of the distillate to be examined are placed in a Nessler tube, and similar tubes are prepared containing from 0·5 c.c. to 10·0 c.c. of the standard 0·001 per cent. furfural solution, the volumes in each case being made up to 10 c.c. with pure 50 per cent. alcohol.

To each tube is added 0·5 c.c. of freshly-prepared aniline acetate (made by mixing equal volumes of pure redistilled aniline and acetic acid), and the contents well shaken. When furfural is present a fine pink colour is developed on standing, and at the end of 10-15 minutes the sample is compared with the standards. It is not desirable to have a greater depth of colour than that given by 10 c.c. of the standard ·001 per cent. solution. A sample giving a deeper colour should be diluted with pure 50 per cent. alcohol.

Aldehydes.—For the estimation of aldehydes, a standard solution is prepared with pure aldehyde-free 50 per cent. alcohol. The aldehyde is best obtained from re-crystallised aldehyde ammonia which has been treated with dehydrated ether and dried over concentrated sulphuric acid, as recommended by Girard and Cuniasse. A solution containing 1 gram of acetaldehyde in 100 c.c. is prepared with aldehyde free 50 per cent. alcohol, and from this standard solutions containing 0·1 and 0·01 grams respectively of aldehyde per 100 c.c. are prepared with pure 50 per cent. spirit. 10 c.c. of the distillate under examination are placed in a Nessler tube, and in similar tubes 10 c.c. each of solutions of pure 50 per cent. alcohol containing from 0·5 c.c. to 10 c.c. of the 0·01 per cent. standard aldehyde solution. To each tube is added 1 c.c. of Schiff's re-agent, prepared by decolourising a standard fuchsine solution with bisulphite of soda and sulphuric acid.

After shaking, the tubes are allowed to stand for about 30 minutes, when the violet colours developed are compared. If the colour in the sample is greater than that of a 10 c.c. standard (*i.e.*, if the distillate shows more than 10 mgms. of aldehyde per 100 c.c.), the sample should be diluted with pure aldehyde free 50 per cent. alcohol.

Higher Alcohols.—One gram of a standard mixture of higher alcohols is dissolved in 100 c.c. of pure 50 per cent. alcohol, and from this a standard solution is prepared containing 0·1 gram higher alcohols in 100 c.c.

To estimate the amount of higher alcohols in the sample, 10 c.c. of the distillate are placed in a small flask of about 75 c.c. capacity (or a lesser quantity made up with pure 50 per cent. alcohol if the amount of higher alcohols exceeds 0·1 per cent.) and into similar flasks 10 c.c. of pure 50 per cent. spirit containing from 0·5 to 10 c.c. of the standard 0·1 per cent. solution. To these solutions are added 0.5 c.c. of a 1 per cent. solution of furfural, and then 10 c.c. of concentrated sulphuric acid are slowly run in so that it forms a layer at the bottom of the flask. The flasks are, one by one, placed in an ice cold water-bath and the contents stirred up by shaking gently during 30 seconds, and afterwards allowed to stand for about an hour at the ordinary temperature of the room before observations are made. In the presence of an appreciable amount of higher alcohols, a reddish violet colour develops, and the proportion of the alcohols can be estimated by comparison with the standards.

The standard higher alcohol mixture used for comparison in the Government Laboratory, and in terms of which the results for this test are expressed, contains:—

Propyl alcohol	1 part
Isobutyl alcohol	2 ,,
Amyl alcohol	3 ,,
Capryl alcohol	1 ,,

These are the usual alcohols other than ethyl found in ordinary fermentations, and the mixture is some approximation to the average composition of the "fusel oil" alcohols of pot still spirits as determined by a number of experiments made in this laboratory.

In exceptional cases it may be necessary to remove the esters and aldehydes before applying this test, but as a rule the colourations obtained from commercial spirits are very similar in tint to those given by the standard mixture, and with careful manipulations and similar conditions of working, comparable results can be obtained without much difficulty. All the results are finally calculated to milligrams per 100 c.c. of absolute alcohol in the samples.

FRENCH OR SAVALLE METHOD OF ESTIMATING THE HIGHER ALCOHOLS IN BRANDY AS MODIFIED BY GIRARD & CUNIASSE

(*Analyse des Alcools, p. 201*).

ABSTRACT.

50 c.c. of the brandy, after distilling to free from colouring and extractive matters, and adjusted to contain 50 per cent. of absolute alcohol, are placed in a flask of about 250 c.c. capacity and 1 gram of metaphenylenediamine is added, together with a little pumice.

The flask is adjusted to a reflux condenser and the contents boiled gently for an hour and then allowed to cool. The contents of the flask are then distilled to near dryness and the distillate made up to the original volume of 50 c.c. with a few drops of distilled water. 10 c.c. of the spirit thus prepared are placed in a thoroughly clean flask of about 75 c.c. capacity, and 10 c.c. of pure concentrated sulphuric acid are carefully run into the flask so that it forms a layer under the spirit. The contents of the flask are quickly mixed and heated over a naked Bunsen flame, with constant agitation for 15 seconds after the commencement of ebullition. It is then set aside to cool, the mouth of the glass being covered with a small watch glass. One or more samples of standard alcohol of 50 per cent. strength, and containing known quantities of isobutylic alcohol (50 milligrams or less per 100 c.c.) are treated in exactly the same way. When cold the colouration given by the sample under examination is compared with those given by the standard samples.

BECKMAN'S METHOD OF EXTRACTION AND ESTIMATION OF HIGHER ALCOHOLS.

ABSTRACT.

25 to 50 c.c. of the spirit, after distillation to free it from any colouring or extractive matter, are taken and diluted with water, so that the mixture shall contain not more than 20 to 25 per cent. of absolute alcohol. The solution is then saturated with sodium or calcium chloride, and extracted four times successively by vigorously shaking with 40 c.c., 25 c.c., 25 c.c., and 10 c.c. of carbon tetrachloride. The carbon tetrachloride extracts are mixed, and then washed three times successively by shaking with 50 c.c., 25 c.c. and 25 c.c. of saturated salt solution, and once with 25 c.c. of saturated sodium sulphate solution. The washings are each extracted with 25 c.c. of fresh carbon tetrachloride, and this after separation is added to the first carbon tetrachloride extract. The mixed carbon tetrachloride solution is then dried by shaking vigorously with freshly ignited calcium chloride in powder.

To the dried tetrachloride solution 3 grms. of nitrite of soda and 3 grms. of bisulphite of soda are added, and the mixture is shaken occasionally during an hour. It is then filtered through glass wool, and to the filtrate 3 grms. of bicarbonate of soda are added, and the mixture shaken occasionally during half an hour. Then 20 c.c. of water are added, and the whole gently shaken and allowed to stand till the mixture separates into two layers. The separated carbon tetrachloride is then run off. To the remainder 10 c.c. of pure concentrated sulphuric acid are added; and, after shaking gently to mix, the mixture is poured into 100 c.c. of ice-cold water. The solution thus formed is titrated with standard permanganate (1 in 1,000) until the pink colour becomes permanent. (The end reaction is not very sharp).

(1 c.c. permanganate solution = ·00278 grams amyl alcohol).

ALLEN-MARQUARDT METHOD OF THE EXTRACTION AND ESTIMATION OF THE HIGHER ALCOHOLS.

ABSTRACT.

Extraction as in Beckman's process.

To the washed carbon tetrachloride solution 5 grams of pure powdered potassium bichromate, 2 c.c. of concentrated sulphuric acid, and 10 c.c. of water are added. The mixture is shaken and gently boiled for eight hours under a reflux condenser. It is cooled, a little pumice and 50 c.c. of recently boiled distilled water are added, and it is then distilled to near dryness. The residue is cooled, 50 c.c. water added, and again distilled.

The distillates are mixed and titrated with n/10 baryta solution, first with methyl orange as indicator, and then with phenolphthalein. The acid indicated by the methyl orange is regarded as mineral acid, and the difference as organic acid which is calculated into amyl alcohol by multiplying the number of c.c. of n/10 baryta solution by ·0088, and the figure indicating the dilution of the alcohol.

To obtain the combining weight the solution containing the barium salt of the acid is separated from the carbon tetrachloride, evaporated, filtered, and finally dried in a platinum capsule and weighed. The weighed residue is then treated with a slight excess of sulphuric acid, again evaporated, and the barium sulphate ignited and weighed. From the weights found the combining weight of the acid is calculated.

(XIII.)

COMPARISON OF THE COLOURATION METHODS OF ESTIMATING THE "HIGHER ALCOHOLS."

Sample.	Government Laboratory Method. (Mixture Standard.) Milligrams per 100 c.c. Absolute Alcohol.	French Method. (Isobutyl Standard.) Milligrams per 100 c.c. Absolute Alcohol.	French Method. (Amyl Standard.) Milligrams per 100 c.c. Absolute Alcohol.
	British Spirits—Whiskey.		
98	39·0	17·5	35·0
99	21·8	6·6	13·2
100	20·1	8·5	17·0
107	97·8	77·0	154·0
108	81·3	90·0	180·0
103	407·2	164·5	329·0
104	472·1	222·7	443·4
109	471·4	249·3	450·0
110	371·4	178·4	356·8
111	410·9	250·7	451·3
112	453·0	197·1	394·2
121	563·2	200·0	400·0
122	460·5	261·4	522·8
123	451·6	245·6	491·2
105	522·6	222·2	444·4
106	771·2	296·0	592·0
	Brandies.		
R 5/04	171·5	109·7	
R 22/04	50·5	23·1	
R 118/04	145·8	93·7	
R 119/04	151·5	93·0	

COMPARISON OF THE ESTIMATION OF "HIGHER ALCOHOLS" BY DIFFERENT METHODS.

Sample.	Government Laboratory (Colouration) Milligrams per 100 c.c. Absolute Alcohol.	Beckman's. Milligrams per 100 c.c. Absolute Alcohol.	Allen-Marquardt.	
			Milligrams per 100 c.c. Absolute Alcohol.	Combining weight of acid
14	228·0	320·3	250·9	89·5
15	245·6	304·3	221·3	81·6
87	350·8	274·4	302·1	80·6
87	350·8	282·9	319·1	73·4
100	266·6	280·5	313·1	74·5
100	266·6	272·1	313·1	82·1
81	317·5	294·7	263·0	90·7
81	317·5	283·0	257·0	75·2
82	317·5	288·6	291·4	83·2
82	317·5	288·6	291·4	76·5

(XIV.)

FUSEL OIL PRODUCED IN PATENT STILL DISTILLERIES FROM GRAIN MASHES.

Distillery.	Materials. Proportions of different Grains.	Gallons of Proof Spirit.	Alcoholic Strength.	Equivalent gallons of Absolute Alcohol.	Lbs. of Fusel Oil.	Lbs. per 100 gallons of Absolute Alcohol.	Equivalent milligrams per 100 c.c. of Absolute Alcohol.
A. English	Malt = 10 Maize = 45 Rice = 45	83,695	O.P. 66·0	47,706	2,219	4·65	465
B. Scotch	Malt = 25 Maize = 72 Oats = 3	2,914,000	66·5	1,660,980	51,943	3·13	313
C. Scotch	Malt = 30 Rye = 30 Maize = 40	29,485	66·5	16,806	507	3·02	302
D. Irish	Malt = 35 Barley + Maize = 65	121,372	66·5	69,183	2,784	4·02	402

(XV.)

POT STILL DISTILLERIES.

Examples of Working Practice and Results Obtained.

Distillery.	Wash produced and distilled.		Low-wines produced by distillation of wash.		Spirits produced by distillation of Low-wines and feints.		Feints separated from Spirits.		Remarks.
	Gals.	Gravity.	Gals.	Alc. Str.	Gals.	Alc. Str.	Gals.	Alc. Str.	
			Feints carried from previous distillation.				994 350 376 214	u. p. 87·5 28·0 proof ab. al.	
A. Small. Materials. Malt only.	14,029	50°			1,134 1,541 878	o. p. 35·9 proof ab. al.	995 350 383 218	u. p. 86·7 28·2 proof ab. al.	
			Feints carried from previous distillation.				1,080 486 277	u. p. 55·0 proof abs. al.	
B. Small. Materials. Malt only.	31,370	50°			2,845 3,462 1,973	21 o. p. proof abs. al.	1,453 659 375	u. p. 54·7 proof abs. al.	
			Feints carried from previous distillation.				1,407 563 321	60 u. p. proof abs. al.	
C. Medium. Materials. Malt only.	54,601	44·5°	17,200 5,848 3,333 (estimated)	66 u. p. proof abs. al.	4,606 5,572 3,176	21 o. p. proof abs. al.	1,598 559 318	65 u. p. proof abs. al.	
			Feints carried from previous distillation.				1,104 541 308	51 u. p. proof abs. al.	
D. Large. Materials. Malt only.	74,331	51°	26,659 8,797 5,014	67 u. p. proof abs. al.	7,822 8,745 4,985	11·8 o. p. proof abs. al.	1,142 551 314	51·7 u.p. proof abs. al.	

APPENDIX R.

Handed in by Dr. T. E. Thorpe, C.B., F.R.S., Principal of the Government Laboratory.

MAP OF IRELAND, showing places where Samples of Spirits were taken for Examination at the Government Laboratory.



Printed at the Ordnance Survey Office, Southampton, 1909.

APPENDIX S.

Handed in by Dr. John T. Wilson.

Samples of Brandy purchased at Retail Licensed Premises in the three Sanitary Districts of the County of Lanark during the six years 1903-8 at the instance of John T. Wilson, County Medical Officer, and analysed by the late John Clark and his successor, Robert M. Clark, Public Analysts.

Description of Purchases, Analyst's Certificate, and Result of Legal Proceedings.

Tabular Number.	Official Number.	Quantity and Price.	Description of Purchase.	Analyst's Certificate.	Legal Proceedings.
1	127	1 bottle, 5/-	Fine Champagne Cognac, Routelle & Co. (2 stars)	Not genuine. 50 per cent. of the spirit not derived from grapes	No prosecution.
2	232	„ 5/-	Alphonse Bellot & Co., Cognac (Trade Mark—Crown Grapes) (2 stars)	„ 50 „ „ „	„
3	80	„ 5/-	Old Brandy, Renault & Co., Cognac	Genuine.	
4	154	„ 8/-	Old Brandy, Tricoche & Co., Cognac (3 stars)	Not genuine. 65 per cent. of the spirit not derived from grapes	Prosecution and conviction. Fined £2. Appeal lodged.
5	170	„ 5/-	——	„ 35 „ „ „ „	Prosecution. Case dropped.
6	176	„ 8/-	Old Brandy, Tricoche & Co., Cognac (3 stars)	„ 62 „ „ „ „	No prosecution.
7	5	„ 5/-	Lucien Foucauld, Cognac (1 star)	„ 37 „ „ „ „	„
8	190	„ 5/-	Du Maurier & Co.'s Fine Cognac Brandy (3 stars)	„ 28 „ „ „ „	„
9	192	„ 6/6	Jas. Hennessy & Co., Cognac (3 stars)	Genuine.	
10	194	„ 6/6	Martell's Cognac Brandy (very old vintage)	„	
11	196	„ 5/6	Old Brandy, J. & F. Martell, Cognac (1 star)	„	
12	198	„ 5/-	Lucien Bellot & Co., Cognac (1 star)	Not genuine. 43 per cent. of the spirit not derived from grapes	No prosecution.
13	200	„ 5/-	Maclachlan, Cognac	„ 20 „ „ „ „	„
14	680	„ 5/-	Finest Old Brandy, Jules Laine, Cognac (vintage 1880)	Genuine	
15	694	„ 5/-	Very Fine Old Brandy		
1904.					
16	3	„ 6/-	Tricoche, Bonniot & Co., Cognac	Not genuine. 37 per cent. of the spirit not derived from grapes	No prosecution.
17	4	„ 5/-	Maclachlan, Cognac	Genuine.	
18	24	„ 5/-	Jules Romford & Co., Cognac (3 stars)	Not genuine. 54 per cent. of the spirit not derived from grapes	Prosecution and conviction. £2 fine.
19	26	„ 5/-	Old Brandy, Tricoche & Co., Cognac (3 stars)	Genuine.	
20	27	1½ gills, 1/6	From bottle labelled "J. & F. Martell"?	Not genuine. 40 per cent. of the spirit not derived from grapes	No prosecution.
21	28	2 „ 2/-	From jar from Wm. Barr & Co., Glasgow	„ 28 „ „ „ „	Prosecution and conviction. Fined £2.
22	29	½ bottle, 2/6	Jules Landy & Co., Cognac	„ 38 „ „ „ „	No prosecution.
23	109	1 „ 5/-	——	„ 48 „ „ „ „	Prosecution and conviction. Fined £2.
24	134	„ 6/6	Lauriel et Fils, Cognac	„ 63 „ „ „ „	„ „ Fined £10.
25	139	3 gills, 3/-	Bulk Brandy	„ 53 „ „ „ „	„ „ Fined £6 2s.
26	183*	1 bottle, 5/-	Very old Australian Brandy	Deficient in ethers as compared with pure brandy=9 per cent. of plain spirit	
27	185	„ 8/-	Château Cognac (Grande Fine), A. Joulin, Dubois & Co. (5 stars)	Genuine.	
28	188*	Received privately	Bulk Brandy	„	
29	189*	„ „	„	„	
30	198*	„ „	„	Deficient in ethers as compared with Cognac Brandy = 48 per cent. of plain spirit	

* Informal.

Tabular Number	Official Number.	Quantity and Price.	Description of Purchase.	Analyst's Certificate.	Legal Proceedings.
31	208	1 bottle, 6/–	Bottle unlabelled	Genuine.	
32	218	1 „ 5/–	J. Favrand & Co., Cognac	Deficient in ethers as compared with Cognac Brandy = 39 per cent. of plain spirit	Prosecution and conviction. Fined £3.
33	224	1 „ 5/–	Very Old Vintage, Cognac Brandy	Genuine.	
34	403	1 „ 5/–	Old Brandy, Wine Growers of Cognac, Jules Duret & Co.	„	
35	446	½ „ 2/6	Bulk Brandy	„	
36	461	1 pint, 4/–	Supplied from glass barrel labelled "Tricoche"	„	
1905.					
37	89	1 bottle, 5/–	Old Brandy, Tricoche & Co., Cognac (3 stars)	Not genuine. Deficient in ethers = 56 per cent. of plain spirit	Prosecution. Case dismissed.
38	114	3 gills, 3/–	Supplied from bottle labelled Maclachlan, Cognac	Genuine	
39	115	„ 3/–	„ „ Martell	„	
40	133	1 bottle, 7/6	Supplied from stoneware jar	Not genuine. Deficient in ethers = 35 per cent. of plain spirit	„ „
41	187	1 pint, 4/–	Bulk Brandy	Genuine.	
42	216	½ bottle, 2/6	„ from jar labelled "Tricoche"	„	
43	218	½ „ 2/6	Bulk Brandy	„	
44	220	½ „ 3/–	Jules Robin & Co., Cognac (Eau-de-Vie, Vieille)	„	
45	239	½ „ 2/9	Bulk Brandy	„	
46	240	½ „ 3/–	„	Deficient in proof spirit 17 per cent., but otherwise genuine	No prosecution.
47	248	1 „ 5/–	Jules Aumon & Co., Cognac	Genuine.	
48	30*	3 glasses, 1/6	Bulk Brandy	„	
49	253	½ bottle, 2/6	„	„	
50	31*	3 glasses, 1/6	J. E. Rochemont & Cie., Brandy	Not genuine. Deficient in ethers = 34 per cent. of plain spirit	
51	275	½ bottle, 2/6	Bulk Brandy	Somewhat deficient in ethers, but I am of opinion that it may be genuine.	
52	306	1 pint, 4/–	Old „	Not genuine. Deficient in ethers = 34 per cent. of plain spirit	Prosecution. Case dismissed.
53	336	1 „ 4/–	South Australian Brandy	Has the composition of genuine brandy.	
54	383	1 „ 4/–	Bulk Brandy	Genuine.	
55	397	½ bottle, 2/6	„	„	
56	399	½ „ 2/6	„	Deficient in ethers = 55 per cent. of plain spirit	No prosecution.
57	430	½ „ 2/6	Ed. Blanche & Co.	Genuine, but of doubtful purity.	
58	434	½ „ 2/6	Rousseau & Co., Cognac	Genuine.	
1906.					
59	3	½ „ 2/6	Bulk Brandy	„	
60	78	Informal	„	„	
61	104	½ bottle, 2/6	„	„	
62	157	½ „ 2/6	„	„	
63	158	Informal	„	Deficient in ethers = admixture of about 55 per cent. of plain spirit	
64	184	1 bottle, 5/–	Bottle unlabelled	Genuine.	
65	226	1 „ 5/–	„	„	
66	381	½ „ 3/–	Caron Frères Co., Cognac	„	
1907.					
67	6*	1 gill, 1/–	Bulk Brandy	„	
68	14*	1 „ 1/–	„	„	
69	15*	1 „ 1/–	„	„	
70	30*	1 „ 1/–	„	„	

71	31*	1 gill,	1/-	Bulk Brandy - - - - - - - - - -	Genuine.
72	32*	1 „	1/-	„ - - - - - - - - - -	„
73	34*	1 „	1/-	„ - - - - - - - - - -	„
74	91	3 gills,	3/-	„ - - - - - - - - - -	„
75	104	3 „	3/-	„ - - - - - - - - - -	„
76	128	3 „	3/-	„ - - - - - - - - - -	„
77	341	½ bottle,	2/6	„ - - - - - - - - - -	„
1908.					
78	106*	1 gill,	1/-	Australian Brandy- - - - - - - - -	„
79	219*	1 „	1/-	Bulk Brandy - - - - - - - - - -	„
80	252*	1 „	1/-	„ - - - - - - - - - -	„
81	455*	1 „	1/-	„ - - - - - - - - - -	Not genuine. Deficient in ethers to the extent of 31 per cent. or thereby.

* Informal.

BURGH OF WISHAW.—Public Analysts, Messrs. R. R. Tatlock & Thomson.

Tabular Number	Official Number.	Quantity and Price.	Description of Purchase.	Analyst's Certificate.	Legal Proceedings.
1	202	1 bottle, 6/-	Otard Dupuy & Co., Cognac - - - - - -	That the said sample contained the parts as stated.	
2	204	1 „ 5/-	Jules Aumon & Co., „ - - - - - -	„ „ „	
3	79*	½ „ 2/6	Bulk Brandy - - - - - - - - - -	That this sample is genuine.	

* Informal.

APPENDIX T.

PAPERS HANDED IN BY MR. A. J. TEDDER, Chief Inspector of Excise.

I.

IMPORTED SPIRITS.

LAW AND PRACTICE OF BOARD OF CUSTOMS.

1. *Under Revenue Acts.*—For the purposes of the Customs Tariff Imported Spirits are classified as shown in the following statement, which also indicates the rates of duty:—

	Rate of Duty. Imported in Casks. £ s. d.		Imported in Bottles. £ s. d.
SPIRITS AND STRONG WATERS:—			
For every gallon computed at hydrometer proof of Spirits of any description (except Perfumed Spirits), including Naphtha or Methylic Alcohol, purified so as to be potable; and mixtures and preparations containing Spirits:—			
Enumerated Spirits:—			
Brandy - - - - - - - - - - the proof gallon	0 11 4	.....	0 12 4
Rum - - - - - - - - - - „ „	0 11 4	.....	0 12 4
Imitation Rum - - - - - - - - - - „ „	0 11 5	.....	0 12 5
Geneva - - - - - - - - - - „ „	0 11 5	.....	0 12 5
Additional in respect of Sugar used in Sweetening any of the above tested for strength, if Sweetened to such an extent that the Spirit thereby ceases to be an Enumerated Spirit - the proof gallon	0 0 1	.....	0 0 1
Unenumerated Spirits:—			
Sweetened - - - - - - - - - the proof gallon (Including Liqueurs, Cordials, Mixtures and other preparations containing Spirits; if tested.)	0 11 6	.....	0 12 6
Not sweetened - - - - - - - - - the proof gallon (Including Liqueurs, Cordials, Mixtures and other preparations containing Spirits, provided such Spirits can be shown to be both Unenumerated and Not Sweetened; if tested.)	0 11 5	.....	0 11 5
Liqueurs, Cordials, Mixtures and other preparations containing Spirits, not Sweetened, provided such Spirits are not shown to be Unenumerated; if tested - - - - - - - - - - the proof gallon	0 11 5	.....	0 12 5
Liqueurs, Cordials, Mixtures and other preparations containing Spirits in bottle, entered in such a manner as to indicate that the strength is not to be tested - - - - - - - - - - the liquid gallon	—	.....	0 16 4
Perfumed Spirits - - - - - - - - - the liquid gallon	0 18 1	.....	0 19 1
Any importations of Naphtha or Methylic Alcohol purified so as to be potable are taken under the heading of Unenumerated Spirits.			

In consequence of these different rates of duty, the Board of Customs have frequently to determine whether a consignment of spirit is correctly entered on importation. For instance, they have to decide whether spirit entered as brandy or rum, as the case may be, is of a character which justified its admission under either of those denominations, and at the rate of duty applicable to such enumerated spirits; or whether its characteristics are such as to render it liable to entry and duty as unenumerated spirits.

(a) BRANDY.

In the absence of any statutory standard of composition for brandy, the Customs are not in a position to prescribe any hard and fast standard for imported brandy, although they have been requested on several occasions to do so. In practice, Customs officers would not pass a spirit as brandy unless they were satisfied that the article so entered possessed those characteristics as to strength, colour and flavour, which, in the experience of the department, have hitherto been commonly associated with imported brandy; and in the case of consignments entered or described as "Cognac," satisfactory evidence would also be required that the goods were the produce of France.

If, therefore, the officers find that spirit entered as brandy does not correspond either in strength, colour, or flavour with the article ordinarily passed by them as brandy, they would submit a sample for test to the Government Laboratory, and the report of the analyst as to the character of the sample would guide the Board of Customs in determining whether the consignment in question should be admitted as brandy or as unenumerated spirit.

The effect of rating as unenumerated spirit an article entered by the importer as brandy is not only to increase the duty charge, but also to disqualify the spirit in question for blending in bond with brandy, and to prevent it from being described as "brandy" in the Customs entry and other official documents, or in the marks or labels on the casks, or bottles, in which it is imported.

Brandy is imported mainly from France, which furnishes about 90 per cent. of the total supply, the remainder comes chiefly from Germany, Egypt and Spain; but small consignments are received from many other countries. The declared value, exclusive of duty, per proof gallon of brandy imported in cask in 1907 from France, Spain, Egypt and Germany was 6s. 6d., 7s. 1d., 3s. 2d. and 2s. 4d. respectively, while for the finer brandies and Cognacs imported in bottle from France the average value was 22s. 5d. per gallon.

A considerable quantity of the brandy imported in cask remains in bond about three years; its usual strength on importation is about "proof."

RUM.

"Rum" has long been regarded as the proper appellation for spirits of a certain character produced from cane molasses in countries in which the sugar cane is grown. For some years past a cheaper imitation of this spirit has been made on the Continent—principally in Germany—and prior to 1891 repeated

complaints were made by rum importers that "Hamburg Imitation Rum" was being imported as "Rum" and blended with genuine sugar-cane rum in bond. This matter came before the Select Committee on British and Foreign Spirits of 1890-91, who recommended that facilities should not be afforded by the Customs for mixing Colonial rum and imitation rum in bond, and that rum should be entered under that name only when it comes from cane-growing countries, and that it should not be mixed with imitation rum in bond.

In consequence of this recommendation the Treasury directed that in the official import list rum should be shown under two heads, viz.:—

Rum (imported from ports in sugar-cane producing countries).

Imitation rum (imported from ports in countries in which the sugar-cane is not produced).

A Customs general order was accordingly issued on the 8th September, 1891, directing that entries as "Rum" were not to be accepted for spirits coming from ports in countries in which the sugar-cane is not grown, unless satisfactory evidence of its manufacture in a cane-growing country is produced in the shape of the bill of lading from the original port of shipment and certificates of landing at, and exportation from, the port of transhipment or exchange.

Spirits imported and entered as "Rum" from the West Indian Islands, Mauritius, Brazil, and other countries in which the sugar-cane is cultivated are, subject to examination, ordinarily accepted as rum, but spirits imported from other countries and alleged to be rum would not be admissible otherwise than as imitation rum in the absence of the prescribed evidence of production in a cane-growing country.

Imitation rum may not be blended or mixed in bond with rum for home consumption. Rum or imitation rum and other foreign spirits may, however, be mixed for exportation, but the word "mixed" must be marked on one head of each cask containing the mixed liquids.

British Guiana and the British West Indies are the main sources of the imports of rum, only a relatively small quantity being furnished by Cuba, Natal, Australia, the French West Indies, and Dutch Guiana.

The average declared value, exclusive of duty, of rum imported in cask in 1907 from the British West Indies was 1s. 10d. the proof gallon.

Rum remains in bond from one to three years; its usual strength on importation is about 40° over "proof."

The deliveries of imitation rum for home consumption are relatively insignificant and have shown a downward tendency in recent years. In 1906-7 they amounted only to 12,208 gallons, and the largest quantity delivered in any year during the past ten years was 44,080 gallons in 1899-1900.

Germany is the principal consignor of imitation rum to this country. The average declared value, exclusive of duty, of German imitation rum imported in cask in 1907 was 1s. 5d. per proof gallon.

GENEVA.

Geneva has appeared in the Customs tariff as an enumerated spirit since 1725. Imported Geneva is a spirit possessing distinctive characteristics and no question as to its identity has arisen in Customs practice. It is entered under such names as "Geneva," "Gin," "Hollands," "Schiedam," and "Bols," and is imported mainly from the Netherlands, though small quantities are also received from Germany, Belgium, and other countries. The total importation of this spirit in 1907 was 444,107 proof gallons, of which 436,727 proof gallons came from the Netherlands. The average declared value, exclusive of duty, per proof gallon of the imports of Dutch Geneva in 1907 was 1s. 11d. in cask and 3s. 10d. in bottle.

UNENUMERATED SPIRITS.

The imported potable unenumerated spirits consist for the most part of unsweetened plain spirits produced in Germany from potatoes. The total imports of foreign plain spirits from Germany and from other countries, and the declared value per proof gallon of the German spirits exclusive of duty, are shown below for the past six years:—

Years (Calendar).	From Germany.	From other Countries.	Total.	Average declared Value of Imports from Germany.
	Proof gallons.	Proof gallons.	Proof gallons.	Per proof gall.
1902 -	3,089,909	94,820	3,184,729	6·87d.
1903 -	1,808,769	98,330	1,907,099	8·56d.
1904 -	338,836	126,877	465,713	14·25d.
1905 -	186,934	52,331	239,265	18·41d.
1906 -	*419,438	*31,670	*451,108	11·35d.
1907 -	*429,439	*36,156	*465,595	11·11d.

The imports of these spirits show considerable variations both in quantity and value, these changes being influenced by the fluctuations in the supplies of potatoes available on the Continent for conversion into spirit.

Plain spirits remain in bond from one to three months: their strength on importation is approximately 65 degrees over proof.

Other varieties of imported potable unenumerated unsweetened spirits include such articles as vodka, saké, arrack, kirschwasser, rye whiskey, and Canadian club whiskey. All these are subjected to test before being admitted as unenumerated unsweetened spirits, but they almost invariably fall into this class.

Sweetened unenumerated spirits include liqueurs, such as bénédictine, kümmel, maraschino, crême de menthe, chartreuse, etc.

Preparations containing spirits, such as varnishes, paints, toilet preparations, perfumes etc., may be sweetened or unsweetened unenumerated spirits.

II.

MERCHANDISE MARKS ACT.

Imported spirits are subjected, like all other goods, to the provisions of the Merchandise Marks Act, 1887. The Commissioners of Customs are entrusted with the administration of Section 16 of the Act which prohibits the importation of:—

(a) Any goods to which have been applied any descriptions, statements or other indications, which are false as to the mode of manufacture, composition, or origin of the goods so marked or described;

(b) Any manufactured goods which bear a name or trade mark which is, or purports to be, that of any manufacturer, trader or dealer in the United Kingdom, and is unaccompanied by a definite indication of the country of origin.

By Section 1 of the Merchandise Marks Act, 1891, the Customs entry relating to imported goods is, for the purposes of the Act of 1887, deemed to be a trade description applied to the goods.

Spirits, therefore, which are falsely described as to their character, composition or origin, either on the labels or marks applied to the receptacles in which they are contained, or in the Customs entry, are liable to detention on importation; as are likewise any foreign manufactured spirits contained in receptacles bearing the name of a manufacturer or trader in spirits in this country unless they also bear a definite indication of the country in which they were produced. Spirits may also be detained if they are contained in any receptacle bearing a mark, whether such mark is accompanied or not by an indication of the origin of the goods, which is, or purports to be, the trade mark of any owner of a British trade mark which has been registered at the Customs department. The only trade marks of this class registered at the Customs relate to liqueurs.

The following are some typical examples of the class of cases in which spirits have been detained on importation for infringement of the provisions of the Merchandise Marks Act. They consist mainly of

* The discrepancy between these figures and those given on p. 394 of Vol. I. is due to the inclusion in the latter figures of a class of spirits which have since been distinguished under a separate heading as "Liqueurs, Cordials, &c."

consignments of plain spirits flavoured and coloured to resemble enumerated spirits and falsely-described, or entered as such.

Examples of cases in which imported spirits have been detained by the Customs for infringement of Section 16 of the Merchandise Marks Act:—

Country whence imported.	Quantity.	Objectionable Marks.	How dealt with.
		Brandy.	
Holland (Rotterdam)	1 case	"Cognac" with name of French firm. (Small label on bottles marked "Netherlands")	Labels removed and destroyed. Goods then admitted to entry as brandy.
Holland (Rotterdam)	2 cases and part case	"Cognac Grande Champagne" (with name of French firm). (Small separate label marked "Bottled in Holland")	Seized and destroyed.
Germany (Hamburg)	Part case	"Vieux Cognac Fine Champagne"	Seized and destroyed.
Trinidad	47 cases	"Pale Cognac." Design of Royal Arms	Seized and destroyed.
		Rum.	
Germany (Hamburg)	Part case	"Fine Old Jamaica Rum"	Seized and destroyed.
Colombia (Savanilla)	34 cases	"Rhum de la Jamaique." (Neck band marked "Ribon Hermanos Mompos")	Delivery for home consumption refused. Allowed to be exported under bond on removal and destruction of objectionable labels.
		Gin.	
Holland (Rotterdam)	1 case	"Dry English Gin" (with name of London firm)	Seized.
		Bitters.	
Germany (Hamburg)	Part case	Angostura Bitters Original D Heleno. (Infringement of registered trade mark)	Seized and destroyed.

III.

MEMORANDUM ON THE POWERS AND DUTIES OF A REVENUE DEPARTMENT.

1. The object of this Royal Commission, as shown by the terms of reference, is to enquire and report whether anything can or should be done with regard to whiskey and other potable spirits, to prevent (1) misdescription, to the injury of the consumer's pocket; and (2) adulteration, to the injury of the consumer's health as well as his pocket.

The following statement will endeavour to show what is being done in this direction by the *Board of Inland Revenue. It will be necessary to refer to what is being done by other Government Departments; but such references will be only incidental and by way of illustration.

Nature and Duties of a Revenue Board.

2. The primary function of the Board of Inland Revenue (as also of the Board of Customs) is the collection of the revenue. The Board of Inland Revenue was not created, and does not exist, for the purpose of preventing either adulteration (except so far as it may affect revenue) or misdescription of articles of consumption. It has entrusted to it, by statute, very extensive powers; and these powers, which necessarily involve interference with trade, and in some cases even the restriction of trade, are given to it for the purpose of collecting the revenue.

The actual collection of revenue and the practical daily use of these powers, is delegated by the Board to their officers, all over the country. The action of the officers is limited, and their duties defined in a code of instructions issued for their guidance by the Board. When questions arise which are not governed by the instructions—and no code, however elaborate, can provide for every difficulty that may arise—it is the duty of the officer to report the facts and ask for directions.

The main object of the Board is the collection of the maximum amount of revenue with the minimum of friction; and, this being so, it is obvious that neither the Board nor the Treasury, to whom it is subordinate, could view without apprehension the imposition upon the Board of duties, unconnected with the collection of revenue, which must inevitably introduce friction and difficulty, not only into the daily intercourse between the individual trader and the individual officer, but also into the relations between the Board and the general body of traders. For in proportion as friction and difficulty are introduced the efficiency of the Board in discharging its primary function of collecting the revenue is impaired.

3. While, however, the Board of Inland Revenue was not created to prevent injury to the health, or to the pocket of the consumer, it is willing, so far as it can, to co-operate in this work. But it can only usefully attempt this on two conditions. In the first place it would offer the strongest resistance to being placed in the position of being the authority primarily responsible for securing these objects: it could not efficiently discharge such a task, for which it possesses neither the authority nor the experience nor the machinery. And, secondly, its activities in this direction must be limited. It could not possibly undertake onerous and multifarious duties outside its own proper sphere without incurring the risk of hampering and neglecting its own work.

Potable Spirits.

4. The general principles which govern the policy of a Revenue Board being as above described, it remains to consider how they apply to the special case of potable spirits. The first thing needful is to have a clear idea of the nature of the article concerned, so as to be able to judge what may constitute "misdescription" or "adulteration." It would be therefore best to begin by endeavouring to give, in as untechnical language as

* When this Memorandum was prepared the duties of Excise were under the management of the Board of Inland Revenue. They were, on 1st April, 1909, transferred to the Board of Customs.

possible, some account of the nature of commercial spirit, and of the methods of its production.

All spirit is produced by the distillation of fermented liquor, which may be derived from various substances —*e.g.*, malt, grain, wine, molasses, potato, or beet-root—and consists in all cases of ethylic alcohol (E) together with a quantity, always minute, of numerous higher alcohols, acids, compound ethers, aldehydes, and basic substances, which may be compendiously described as bye-products (x). E by itself, without the bye-products, is practically characterless. What mainly determines the character or flavour of a distilled spirit is the character and the quantity of the bye-products. Their character is determined almost wholly by the ingredients used in the liquor from which the spirit is distilled. Thus:—

Pure Malt Whiskey - = E + x (bye-products from malt)

Malt and grain Whiskey = E + x (bye-products from malt and grain)

Brandy - - - - = E + x (bye-products from grape juice)

Rum - - - - = E + x (bye-products from sugar-cane)

and so on.

The quantity (and to some extent the quality) of the bye-products is determined by the particular kind of still used in the process of distillation.

With pot still spirit the amount of x is relatively large as compared with patent still spirit, but even with pot still spirit the quantity of x is commonly not more than between 1-400th and 1-700th part of the volume of the spirit. In rare and exceptional cases the quantity may reach 1-200th part.

Thus, of every ordinary spirit of commerce not less than 99·5 per cent. in volume consists of one and the same invariable element, viz., ethylic alcohol (more or less dilute), and not more than ·5 per cent. consists of variable and distinctive elements.

While x is what gives character to spirit—is, so to speak, the condiment that qualifies what would otherwise be insipid—it is alleged that it also imports into it an irritant and toxic element, especially when new. A good deal more is known now in regard to x than was known in 1890-91, when the Select Committee of the House of Commons on British and Foreign Spirits sat. But even now it is doubtful whether we have emerged wholly from the region of conjecture in reference to the properties and action of the bye-products, or of the modifications produced in them or in spirits by age.

Potable Spirits in relation to Public Health.

5. The natural inference from the facts above stated would appear to be that the difference between one spirit and another in respect of the material, or of the process of manufacture used in its production, or in respect of its age, has no such influence upon "wholesomeness" as to warrant regulation in the interest of the public health. This was, in fact, the conclusion arrived at by the Select Committee of 1890-91, and, so far as the Board know, no scientific or medical expert evidence has since been brought forward of sufficient importance to throw doubt upon the correctness of that conclusion.

So far as popular opinion goes, it seems in the last sixteen years to have come more into accordance with the view of the Select Committee. Less is heard now than then of the bad effects of the bye-products on the public health, or of the alleged sale in large quantities in this country of very deleterious spirit, which produces in the drinker violence or even madness, although there is still a certain amount of loose talk on the subject, especially at a time like the present when public interest in the question is aroused.

The experience of the Board is the same as it was in 1890-91, viz., that spirit of a deleterious nature is seldom discovered by the Board's officers or brought to their notice by the public. So far as the Board are aware, none of the witnesses who have been heard before the present Royal Commission have made any serious attempt to prove danger to the public health. Many witnesses on the other hand have definitely taken the opposite view, and expressed the opinion that the question of public health is practically not involved in the present enquiry. The Board submit therefore that the evidence at present available shows no cause for further action by them or their officers in connexion with potable spirit in the interest of the public health.

Mis-description of Potable Spirits.

6. It remains to consider whether the public interest, that is to say either the interest of the consumer or the interest of the producers of particular classes of spirits, renders it desirable that legislation should be passed or regulations should be made and enforced, for the purpose of preventing the sale of spirit under a name or description that does not accurately indicate its nature and origin; and, if the answer be in the affirmative, to consider further how far it would be practicable to make such law or regulations effective. The question is obviously a wide one, involving possible action by public departments other than the Board of Inland Revenue. The present memorandum will, however, confine itself to considering what is done or could be done by this Board.

7. It is often represented that very much more ought to be done than is done at present to protect the consumer and to furnish a guarantee of potable spirit all the way from its manufacture in the distillery to the throat of the drinker, a guarantee that would give an accurate description of the origin, composition, age and quality of the spirit; and it is sometimes further maintained that the Board of Inland Revenue are better fitted than any other department to undertake this responsibility. In order to understand this question it is necessary to realise that there are two stages in the life of all potable spirit; the first stage, when it is in the keeping of the Revenue authorities either in the distillery or in the bonded warehouse, and the second stage, when it has paid duty, and passed beyond their control. Now it is obvious that however strict the regulations in the distillery and in the bonded warehouse are made, however thorough be the supervision of the Revenue authority, the consumer obtains no real security unless the spirit, after it leaves bond, can continue to be effectively supervised. It is not known what proportion of the spirits that are bottled for consumption are bottled in bond, while, of course, what issues from bond in cask goes almost wholly to the "trade" and may undergo considerable alteration before it reaches the consumer. Therefore, to supervise spirits in bond and to leave them free out of bond would be useless. It is no good working hard to stop one leak if you leave open another as bad or worse. If the consumer requires protection the business of protection cannot be confined to the period before the spirit leaves bond.

Supervision of Spirits which have passed out of Bond.

8. Once spirits have left the bonded premises the Board of Inland Revenue are unable with their existing powers and machinery to watch over them till they reach the consumer so as to guarantee that they are not altered in their character or in their description, *i.e.*, by alteration of the spirit itself or of the label on the vessel which contains it. Nor, so far as can be seen, could they exercise any effective supervision, even if additional powers were conferred upon them by Parliament, for their experience has convinced them that the frontier of effective revenue supervision is the door of the bonded warehouse, and that once outside this frontier their officers cannot be an effective patrol. This was apparently the view of the Select Committee of 1890-91.

The question remains whether any other department of Government can effectively watch over potable spirits which have passed outside Revenue control till they reach the consumer. This is not a question on which the Board can give an authoritative opinion, but they gather from the evidence that has hitherto been given before this Royal Commission that there will be considerable difficulties in the way. So far as they understand the matter the ultimate security for the consumer getting what he asks for is the analysis of the article, and the general tenour of the evidence hitherto appears to be that analysis cannot be relied on in the case of potable spirit. If, as a result of the enquiry by this Commission, arrangements can be made for the effective patrol of the area outside bond by some other Government department the situation would, of course, be considerably altered. At present, however, the outside area is not effectively patrolled, and this vitally affects the question as to how much can usefully be done by the Board of Inland Revenue within the area under their supervision.

Supervision of Spirits inside Bond.

This aspect of the question was fully considered by the Select Committee of 1890-91, and their decisions may be summarised as follows:—

(1.) That they would "not attempt a legal definition of whiskey"; that they were "unable to restrict the use of the name as long as the spirits added are pure and contain no noxious ingredients."

(2.) That they could "not recommend any increased restrictions on blending spirits."

(3.) "That compulsory bonding of all spirits for a certain period is unnecessary and would harass trade."

(4.) "That it is not desirable to pass any compulsory law in regard to age."

(5.) "That a standard of purity cannot be applied to the spirits made in this country, or to those imported from abroad."

These findings are clear and explicit. They hold the field unless or until they be modified by some judgment not less authoritative than that of a Select Committee of the House of Commons, and they place very definite limits upon the action that might be taken by the Executive in regard to the matters to which they refer.

As regards the applicability of the Merchandise Marks Acts to descriptions placed on spirits, the finding of the Committee may be quoted verbatim:—

"Under this Act it is illegal to sell under 'a false trade description,' such as giving a false account of the place or country in which the goods are produced, or as to the materials of which they are composed. Under this Act, we think that both the Inland Revenue and the Customs might make rules for preventing frauds by more precise descriptions of spirits, so long as they remain in or are delivered from bond. For example, the present rules enable a person to mark his cask with the nature of its contents, such as 'malt whiskey.' The authorities would not allow a false mark to be placed on the casks with their knowledge, but it would be practically impossible for them to vouch that all blended spirits put in bond did not contain mixtures of malt whiskey, or whiskey made from grain, or that they did not contain whiskeys produced by patent stills. All that they can do is to prevent false descriptions when they know them to be false."

"Your Committee are of opinion that both the Inland Revenue and the Customs should support the operation of the Merchandise Marks Act, as far as they are able to do so, by taking precautions that spirits are not falsely described either as to their character or country of origin, while they are in bond or delivered in bond. The authorities in charge of bonded spirits do not knowingly allow false descriptions, and have expressed their willingness to prevent them. But it must be borne in mind that the trade are against undue restrictions of description, and have got some of them removed. Your Committee have received representations from importers and from bonded warehouse keepers in this country, that further restrictions will hamper trade."

10. Such were the conclusions arrived at after full consideration by a very efficient Committee in 1890-91. As far as the Board are aware the situation has not materially altered since, and nothing has happened to throw doubt upon those conclusions. The question for consideration at the present time is therefore how far the regulations and practice of the Board of Inland Revenue conform to the policy prescribed by the Select Committee; or in other words, whether the Board does, as far as it is able under existing conditions, take precautions that spirits, while they are in bond or on their delivery from bond, are not, to the knowledge of the Board, or of the Board's officers, falsely described either as to their country of origin or their character.

11. By the expression "country of origin," it seems perfectly clear that the Select Committee referred to the distinction between spirit made in the United Kingdom and foreign spirit, not to any distinction between English, Scotch, or Irish spirit.

In this respect the Board fully carry out the recommendation of the Committee. British and foreign spirits are clearly distinguished by law, and, as a rule, clearly distinguishable, in fact. They pay different rates of duty, and are not allowed to be mixed, or altered in denomination, before paying duty.

If they are going to be exported—in which case no question of duty arises—they may be mixed in bond; but then the resulting blend must not be described otherwise than in accordance with the known facts. If the accounts of the stock of any spirit show clearly that it is a mixture partly of British and partly of foreign origin, it must not be labelled with words claiming for it an exclusively British or an exclusively foreign origin. Similarly, if the accounts show any spirits to be exclusively of foreign origin, the labels, etc., must not claim for them an exclusively British origin, and vice versâ.

12. As regards misdescription in respect of character the position of the Board is much more difficult. The different varieties of potable plain British spirits are not distinguished by law, and are often not distinguishable in fact. Misdescription in respect of character is, therefore, difficult and often impossible to prove. The Board, with the approval of the Treasury, has always held fast to one principle. They have consistently refused to accept responsibility for, or guarantee the nature, origin and character of, the spirits dealt with in bond; and they have consequently refused to allow the use of any label upon spirits dealt with in bond implying official responsibility for or guarantee of the correctness of the description. The Board are well aware that this is not an ideal policy, as it is possible under it that goods can leave bond under misleading labels. The position is not one which the Board relishes, or which it has accepted from indifference. The two Revenue Boards and the Treasury have to deal with a question bristling with practical difficulties in a practical manner, and after very full discussion the policy above described was adopted as being less open to objection than any other alternative.

General Policy of the Board.

13. The Board feel that they cannot, under existing conditions, give any guarantee as to the character of spirits, or the correctness of the labels or descriptions placed on them in bond, which would afford any real protection to the consumer.

In the first place, as above pointed out, there is at present no efficient control of spirits after they have left bond, so that, even if the label when it leaves bond is accurate, no real security is attained by the consumer. Further, much blending is now done outside bond, and if the restrictions inside bond were increased, it would be easy for any person who desired to blend free from Excise control to do all his blending outside.

But, leaving this point out of consideration, the Board feel that, even in bond, they cannot with their present powers give a satisfactory guarantee. In the first place their officers have not sufficient knowledge; they do not know accurately with regard to any particular spirit, what are the materials from which it was derived, whether it was made in a pot or patent still (some distilleries have both stills); or what its age or origin is (it may be blended). Secondly, the administrative difficulties would be very great; heavy demands would be made upon the time of the Revenue officers, who would be under the necessity of scrutinising labels and marks on the one hand, and official records on the other, for the purpose of discovering discrepancies between them; considerable delay and friction would result, and the relations between the Revenue officers and trader would be needlessly embittered by the increase in the number of points of possible conflict.

Nor in the opinion of the Board would the result aimed at be attained, for their experience leads them definitely to the conclusion that it would be impossible for Revenue officers to exercise supervision over the great variety of labels which are used on bonded goods, or to determine what labels should be allowed to be used and what should be rejected, in a complete and at the same time fair manner. The Board are therefore clearly of opinion that it would not be possible for them under existing circumstances to give a satisfactory guarantee; and this being so, they would strongly demur to giving any guarantee at all. For it is practically certain that any guarantee given by the Board would be accepted by the public without question.

To sum up, therefore, the reasons which lead the Board to hold the view that under present conditions they should not be required to assume responsibility for the correctness of labels or trade descriptions applied to potable spirits in bond may be stated as follows:—

(1) The law imposes no obligation on the Board to take cognisance of such descriptions.

(2) It is not, in the Board's opinion, expedient that they should attempt to use the powers of supervising and controlling operations in distilleries or bonded warehouses (which have been conferred upon them for Revenue purposes) for the purpose of preventing the application to spirits of any trade descriptions for the correctness of which the Board are not prepared to vouch; because the adoption of such a policy

(*a*) would be not only futile, but actually mischievous, seeing that the prohibited descriptions could be applied with impunity out of bond, and the supposed protection to the public would be illusory and misleading;

(*b*) would appreciably increase the labour and the responsibilities of Revenue officers, and would increase the cost of their establishment, while diminishing their efficiency as collectors of the revenue.

14. The Board have set out at some length, for the information of the Commission, the reasons which in their opinion render it undesirable for them to undertake any general responsibility for the correctness of labels applied to spirits in bond.

It is to be observed that the Select Committee of 1890-91 did not suggest that the Board should assume any such general responsibility. It may be inferred that it considered such a course impracticable, for after full consideration it confined itself to expressing the opinion that the Board should, as far as possible, take precautions to prevent the affixing to spirits while under revenue control of descriptions which are known to the Board's officers to be false, in respect of country of origin or character.

The practical question to be considered is therefore whether the Board does, as far as it is able under existing conditions, carry out the policy approved by the Select Committee; this can best be decided by reference to the actual regulations on the subject.

Bonded Warehouses. Existing regulations of the Board of Inland Revenue (and Customs).

15. Statutory authority is possessed by each Revenue Board to prescribe regulations governing the various operations allowed by law to be performed upon potable spirits in bond. The existing regulations are uniform in Customs and Excise bonded warehouses, having been drawn up under Treasury directions by the two Boards in consultation; they can be altered as occasion may require. That portion of the regulations which deals with labelling in bond has always presented exceptional difficulties, and the paragraphs dealing with the matter are, in their present form, the result of long consideration by both Revenue Boards and by their legal and practical advisers.

They are to the following effect:—

When spirits are bottled in bond officers are instructed under their general regulations to object to any label which claims an exclusively British origin for spirits which can be proved by the official accounts to be of exclusively foreign origin, or which claims an exclusively foreign origin for spirits which can be proved by the official accounts to be of exclusively British origin.

Similarly, if the official accounts of any spirit show clearly that it is a mixture which is partly of British and partly of foreign origin, officers are instructed to object to any label claiming for it an exclusively British or an exclusively foreign origin.

With the exceptions specified above officers are not allowed to interfere on their own responsibility with labels on bottles or cases beyond seeing that no label contains such expressions as "Bottled in Bond," "Bottled in Customs (or Excise) Warehouse," or any other indication implying official countenance or guarantee of the correctness of the statements made.

Wines or spirits imported in cases may be adjusted and repacked, and cases either imported or packed in warehouse may also be unpacked for remedying, by renewal, any damage to the labels or capsules caused by water or other accident, but labels or capsules must not be changed for others not identical in terms.

16. It must be remembered that the regulations, taken by themselves, do not represent everything that the Board is able to do in the direction of preventing false descriptions of spirits in bond. The regulations are drawn up for the guidance of officers in their daily work, so that they may know what they may allow, and what they must forbid, without reference to the Board. Looking to the numbers of officers employed under the Revenue Boards, and to the fact that they necessarily vary in experience and intelligence, it is essential that their instructions should be explicit and precise, and should not impose on them duties which leave too much room for the exercise of individual discretion.

Various questions arise that are not covered by the instructions in connection with the description of spirits, and they are often very difficult to deal with. The evidence afforded by the official records, or the element of terminological inexactitude in a description, may give rise to doubt; the local officer cannot be expected to deal with the matter, as he might take action which would run counter to the general policy of his Board. In such a case it is open to the Board, when their attention is called to the facts, to take such action and to put such pressure on the trader as the circumstances may seem to justify. In a clear case of misdescription, where the facts are not in dispute, *e.g.*, where their attention is called to an obviously false statement as to the age of the spirits, objection would be raised to the label.

To mention a concrete case, it was reported to the Board that in a certain warehouse a label was being used for bottled spirits setting forth that the spirits were "guaranteed 20 years old whiskey," whereas the fact was there was no spirit of this age in stock; the attention of the proprietor of the spirits was drawn to the matter and the use of the objectionable label was discontinued.

17. The Board submit that their present system, which has received the approval of the Treasury, viz., the action of their officers within the definite lines laid down in the instructions, supplemented by the pressure which the Board can exercise in special cases, is the best and, indeed, under present conditions, the only possible system which they can safely follow.

Under this system it is possible for both Boards to deal with proved cases of misdescription. They cannot effectively deal with cases of suspected misdescription, but under no system would this be possible. The real difficulty is that under present conditions it is very difficult to prove misdescription.

The report of the 1890-91 Select Committee is the last authoritative pronouncement upon this very difficult question, and till its findings are authoritatively modified, the Board must accept the conclusions of the Committee, and shape its policy accordingly. The Committee were of opinion that anything like a minute classification of spirits is out of the question. The Board cannot therefore, for instance, quarrel with the term "whiskey" (for there is no legal definition) or with the words "old" or "fine" (which are relative terms). The words "Scotch" and "Irish" present no less difficulty. There is no legal definition at present, and to judge by the evidence given before this Commission, experts are at issue as to what the definition should be. Scotch whiskey should, according to some witnesses be defined as "whiskey made in Scotland," according to others as "whiskey made in Scotland from cereals actually grown in Scotland," and according to others as "whiskey made in Scotland from cereals which can be grown in Scotland," and the same for Irish whiskey. But it is argued by others—and the popular judgment lends some support to the argument—that the words are not necessarily to be taken as implying that the spirits are in their origin mainly or exclusively Scotch or Irish, but are generic terms expressive of character, similar in their nature to, *e.g.*, such names as "Cheddar cheese" or "Pilsener beer."

The expression "Irish roll" tobacco is also cited, which has been judicially interpreted as connoting not geographical origin, but a particular process of manufacture.

18. The Board's policy is, of course, a compromise: while declining to accept a responsibility which they cannot honestly or adequately discharge, they endeavour so far as they can to prevent clear misdescription.

The policy is in the main, the Board believe, successful. While it cannot be denied that spirits may sometimes be delivered from bond bearing descriptions far from veracious, the Board do not admit that this sort of fraud is as widespread as is often alleged. They believe that in the vast majority of cases the labels used in bond are reasonably correct, and that only in comparatively rare cases are they such as would offend against any classification that the Board could

adopt if they were to attempt to assume responsibility for the correctness of all labelling in bond. The only alternative policies would be for the Board either to attempt to assume responsibility for the correctness of all descriptions affixed in bond, which, as shown in this memorandum, would be an ineffective and dangerous policy, or to refuse to allow any labelling in bond, which would disorganise the trade.

The Board are fully aware of the importance of the question. They are constantly considering it, and will continue to consider it in the light of any new experience that may come to them.

Much will, of course, depend upon the findings of this Royal Commission. If the Commission are able to arrive at definitions of the different sorts of potable spirits, which will have legal validity and be capable of practical application, many labels and trade descriptions which can now only be regarded as suspicious or of doubtful veracity, will become definite and provable misdescriptions.

Board of Inland Revenue,
August, 1908.

IV.

SECTION 69 OF SPIRITS ACT, 1880.

"A distiller or rectifier may, in accordance with the prescribed regulations and on giving to the proper officer or the authorised officer of Customs one day's notice, add any sweetening or colouring matter, or any other ingredient to any spirits warehoused by him in an Excise or Customs warehouse." Section 74 of the same Act requires that spirits so operated upon shall be delivered only for exportation or ships' stores.

The following appears to be the history of this section:—

In 1860, by Section 139 of 23 and 24 Vic., cap. 112, distillers were, doubtless in response to requests from some members of the trade, first allowed to "add any sweetening or colouring matter" to spirits deposited by them in *Customs Warehouse* for export only.

Section 144 of the same Act allowed a rectifier or compounder to add any sweetening or colouring matter, or any other ingredient, etc., to spirits in Customs warehouses, for exportation only; this privilege had been granted in 1848 (Section 22 of 11 and 12 Vic., cap. 122, which Act was repealed by the 1860 Act); in 1865 Section 144 was repealed by Section 14 of 29 and 30 Vic., cap. 64, but re-enacted by Section 7.

It was not until the Spirits Act of 1880 that the above provisions were made applicable to Excise Warehouses, the above quoted enactments being repealed at the same time.

The enactments relating to the addition of colouring and sweetening matter by distillers and rectifiers were combined in the Section (69) now under review. It will be observed that the section as enacted went further than the then existing law, as the 1865 Act, which authorised the addition of other ingredients, restricted the concession to a rectifier or compounder.

Rectifiers at the present time avail themselves of this section, carrying on in fact a kind of compounding in bond; to take away the privilege would undoubtedly be considered a hardship by certain members of the trade.

It is not an unusual thing for colouring matter to be added in quantity to spirits either in store or warehouse by distillers for exportation.

Very few distillers ever have availed themselves of their right to add "ingredients."

The operations allowed under the section in question upon spirits for exportation are, it may be pointed out, only such as it is perfectly legal to perform upon duty-paid spirits out of bond. The sole reason for limiting the operation in bond to spirits intended for exportation is a revenue one, the effect of the addition to spirits of colouring or sweetening matter in quantity or of any other ingredients is almost of necessity to obscure the true strength of the spirits; this, if allowed with spirits for home consumption, would mean loss of duty.

It may be added that there are various other operations allowed in respect of spirits intended for exportation which are not, and could not be, allowed upon spirits for home consumption, and that to make the operations on spirits for home consumption and exportation precisely similar would mean the withdrawal of a number of privileges which spirit merchants now possess in the way of preparing spirits in bond for the foreign market.

V.

MIXING OF FOREIGN AND BRITISH SPIRITS IN BOND.

This operation is expressly restricted to spirits intended for exportation. There is no statutory authority for it, but it is allowed under the joint warehouse regulations of the Boards of Customs and Excise.

The regulation is set forth in paragraph 323 of the Warehousing Code, viz.: "British plain spirits may be mixed for exportation with foreign spirits not sweetened or mixed, and the produce is to be described in the accounts as 'British and foreign spirits mixed in bond,' the casks being marked as directed in par. 321 (*i.e.*, 'mixed,' all other marks being erased). But British plain spirits must not be mixed with foreign sweetened spirits, nor British compounded spirits either with foreign spirits or with any compounded spirits of a different denomination."

The concession is one of old standing; it was in existence when foreign spirits were first allowed to be deposited in Excise warehouses in 1869, and was without doubt granted originally to meet trade requirements.

It may be noted that, so far as revenue regulations are concerned, there is no question whatever of these spirits leaving the country under a misdescription as to their origin.

There is now no law to prevent the mixing of foreign and British spirits out of bond, nor is there any revenue restriction as to the sale of such mixed spirit.

VI.

SOME ACCOUNT OF THE EARLY USE OF THE PATENT STILL BY DISTILLERS IN THE UNITED KINGDOM.

Saintmarc's Still.

The first departmental record of anything in connection with a patent still for distilling spirits is a petition from Mr. Jean Jacques Saintmarc, of the Belmont Distillery, Vauxhall, dated 15th April, 1826; he had erected the still at his distillery, and asked that it might be tested in the presence of the Board or of their officers. In his petition he stated that "the quality of the spirit obtained by means of this still will be much improved, and as it is produced from the wash at one operation, thereby simplifying the duties

of the officers of Excise, and diminishing the possibility of fraud, your petitioner submits that the Revenue will in consequence be benefited."

The following excerpt from the "Specification" lodged in 1825 by Mr. Saintmarc, after grant of Letters Patent, is of interest, as showing the aims of the inventor; he states the nature of his invention as:—

"First, the nature and peculiar advantage of my improved process and apparatus are, that by means of one fireplace or furnace, and the succession of coppers or vessels hereinafter described, the distillation from the wash to the alcohol is effected by one operation, and the successive repeated condensations that take place in the manner herein stated deprived the spirit of the phlegms or watery parts, and of the injurious qualities that it generally contains when distilled in the way usually practised. The purity in the quality of the spirit and its retaining its natural flavour proceeds chiefly from these repeated condensations, and likewise from a considerable portion of the spirit which is obtained proceeding from the coppers or vessels where the wash is not brought into direct contact with the fire. The wash in its passage downwards through the several coppers assists in the process of condensing the rising vapour, and by the consequent absorption of caloric or heat by the wash, the same is brought into more prompt distillation when arrived in the lowest copper or boiler in contact with the fire, and fuel is thereby economised and saved."

"Second, with the like advantages of using only one fire, and with expedition and economy of fuel, my said improved apparatus effects the spirituous distillation or rectification of raw or feint spirit, and produces at one operation alcohol of purest quality."

The latter paragraph evidently refers to the use of the still for the purpose of rectifying spirit.

The apparatus was actually a pot still with a rectifying head; it was heated by means of a furnace.

Permission was duly given for the desired experiment to take place. Messrs. James Steel and William Hunt, surveying general examiners, attended and witnessed it. The still was a working model, 11 feet in height and 18 inches in diameter; 105 gallons of wash were distilled, the still being charged several times during the day on which the experiment took place. It was reported that the spirit produced varied in strength from 36 to 58 o.p., the average being 43·1 o.p., but that it was of a greenish yellow colour with an extremely pungent and disagreeable taste and smell. The strength of the spirits obtained was remarkably high, but it was not considered that the experiment was on the whole a success.

Nothing more appears to have been heard of the still until the following year, when one of the proprietors of the patent writes, under date 25th January, 1827, asking that further experiments may be allowed at Mr. John Drummond's Distillery, Spitalfields. Some alteration had been made in the construction of the still, and the experiment was carried out under official supervision on the 3rd February; 100 gallons of wash were distilled, the produce being 7 gallons of spirits at 44·8 o.p., the strengths varying during the day from 60·0 o.p. to 10·0 u.p., the whole being collected together. The strength attained is again somewhat remarkable. The quality of the spirit was stated to be excellent, and it was reported that the experiment had proved the possibility of producing spirits of a very high strength at one operation. It is of some interest to note the following remark, which appears in one of the reports, viz.:—"The process of Mr. Saintmarc is not new; several contrivances have within the last few years been invented and tried with success."

This still appears to have first come into practical use not for the purpose of distilling spirits from wash, but for rectifying spirits at a rectifier's. One firm of rectifiers, in an application dated 16th November, 1827, states that they have erected a "rectifying still on principle of J. J. Saintmarc's patent," and ask that they may be allowed to use it; the official report was that it was not constructed according to law, but eventually a temporary indulgence was granted for its use. There were two other instances the following year where rectifiers were allowed to use similar stills.

The still had evidently in the meantime been perfected as an apparatus for the manufacture of spirits from wash, as an application dated 17th July, 1827, was made for permission to erect one of a capacity of 2,000 gallons at a distillery at Midleton; in the application mention was made of a still of this description being then at the coppersmith's ready for shipment to the West Indies. The applicant was informed that he might apply to the Treasury for permission to erect and to use the still; as permission was, however, given as for an experiment only, the distillers concerned would not proceed with the matter.

The first distillery at which this still was erected for commercial purposes was that of Messrs. T. Houghton and Company, at Carlow. In the application to the Treasury dated 26th March, 1828, the petitioner, Mr. J. B. Sharp, stated that the "still affords extensive advantages to wash distillers and rectifiers of raw spirits," and that the "use of the still will afford great advantages to the public in the production of a spirit of improved quality at less expense." A Treasury letter, under date 27th May, 1828, authorised the erection and use of the still as an experiment, provided the openings in the still were secured and no means left of introducing wash except through a close metal pipe from the wash charger and subject to any other regulation thought necessary: the principal regulation considered necessary was the provision of a close safe through which to run the spirits to the spirit receiver.

A very voluminous but withal interesting report on the working of the still was made by the supervisor, James Morris, Dublin 4th district, in September, 1828. His description, which tallies in all essentials with the description given in Mr. Saintmarc's specification, may be thus summarised:—

The still consisted of a series of compartments surmounting each other; each compartment was intended to be covered with wash to a certain depth. The alcohol in the wash in the lowest compartment being vapourised, on the wash being subjected to heat, passed by means of tubes connecting the compartments through the wash in the two next upper compartments losing much of its natural impurities in its passage through them and heating, and partially vapourising, the spirit in the wash through which it passed; in the compartments above these two the weaker portion of the vapour was condensed under semi-circular caps or domes, the wash covering these domes acting as the condensing medium; a tube leading from the one dome to the dome in the next upper compartment carried the stronger vapour from one compartment to another, the vapour eventually leaving the still to be condensed in a worm in the usual way. When the wash in the lowest compartment was exhausted of spirit, that from the next upper compartment was allowed to run down into it, the wash being removed from compartment to compartment and a further quantity being introduced into the topmost one.

The supervisor reported that the strength of the spirit collected during the working of the still varied from 10·0 o.p. to 42 o.p.; he was chary of expressing his own opinion as to the quality of the spirit, but gave the opinions of operative distillers of various noted distilleries; the operatives were unanimous in their expression of approval, though one of them remarked on the possibility of the spirit being made too pure, by being divested of too much of the essential oil. A London rectifier is stated to have highly approved of the spirit, as also did the dealers in the neighbourhood.

The following reference is made to this particular still in the notes to the official report on the Distillery Returns for the United Kingdom for the quarter ended 10th October, 1828, viz.:—"Mr. Thomas Houghton, in Carlow district, who has erected a patent still, whereby good spirits were produced on the first distillation."

The still evidently proved a success, as in the following year Treasury authority was asked for permission to be given any distiller to use stills of this description, it being mentioned that stills had been erected at three other distilleries, one at Dublin, and two at Cork. Treasury authority was duly given on 4th Febraury, 1829.

Stein's Still.

Robert Stein of London, under date 26th December, 1827, petitioned the Treasury to be allowed to experiment with wash at Mr. Attlees' distillery at Wands-

worth with an apparatus of his invention, and authority was given on 19th January, 1828. This experiment was not carried out, but a further application was made by Mr. Stein in August, 1828, to be allowed to carry out the experiment at his brother's distillery at Kirkliston, which was duly allowed. In the report of the officials who attended the experiment it is stated, 8th August, 1829, that "the spirits produced, from the absence of the essential oil, are much more pure and wholesome than those produced by common distillation," and it is remarked that "to separate this oil in the process of distillation has engrossed the attention of many practical distillers, but hitherto with but little success."

The original plan of this still shows it to have been of a somewhat complicated character; heated wash was sprayed into a cylinder where it was subjected to the action of live steam; the spirit being vapourised by the steam was conveyed into a purifying vessel where the heavier impurities were condensed, cold wash on its way to the spraying cylinder acting as the condensing medium and thus taking up heat; the pure vapour passed over to the worm tub and was there condensed and run into a spirit receiver; the spent wash from the cylinder flowed to an ordinary pot still, where it was boiled and the vapour collected as feints.

The use of this still was authorised by Treasury letter dated 18th December, 1829, one of the conditions being that the produce of each fermenting back was to be kept separate. The first stills of this make were erected in Scotland at Kirkliston, and Cameron Bridge Distilleries. Apparently the still did not at first meet with the success anticipated by the inventor, as in March, 1830, he asked for permission to carry out further experiments at Leith Distillery.

A number of these stills were subsequently erected at distilleries in Scotland.

Coffey's Apparatus.

This still, which eventually ousted almost every other patent still, and is now in practically universal use in this country, was first erected in Dublin; it appears to have been in use at two distilleries before the inventor, Æneas Coffey, of the Dock Distillery, Dublin, petitioned the Treasury under date 26th July, 1832, that his apparatus might be allowed to be used under the same conditions as Saintmarc's and Stein's, *i.e.*, that the spirit produced by the still should not be required to be run through a low wines still. The Collector at Dublin reported 14th August, 1832, that the still was being used at Mr. Coffey's and Mr. Haig's distilleries, and that, to comply with the law, the spirits were treated as low wines and were run to the spirit receiver through a low wines still, though they were not redistilled, a somewhat ridiculous method of meeting the law's requirements, which, as was pointed out by Mr. Coffey, exposed the revenue to unnecessary risk. This historic apparatus was sanctioned by Treasury Order, dated 10th September, 1832, conditionally on all openings being satisfactorily secured and an approved safe being fixed at the end of the worm.

A contemporary drawing of one of the earliest of Coffey's stills, erected in Ireland in 1833, goes to show that the original was considerably more complicated than the one now in general use.

Other Patent Stills.

There were doubtless a number of other continuous stills invented and tried about this time, *e.g.*, that of Richard Wright, which is spoken of as a "steam still," in June, 1827, in a letter from a distiller in York, who asked to be allowed to erect one at his distillery, and "Shand's Still," which was allowed to be erected at Fettercairn Distillery by Treasury letter of 8th August, 1832, in which reference is made to it as being apparently "conducted on the same principle as that of Mr. Saintmarc."

Mention may also be made of a still invented by William Egan in 1829, for obtaining a purer spirit in larger quantity and at less cost for fuel; to the head of the still, which was of the pot variety, was attached what was termed a condenser and recondenser from which there was a return pipe to the still. Roughly speaking, the condensing apparatus was not unlike some of the existing purifiers attached to the heads of some pot stills.

A curious apparatus is referred to in an Excise General Order of February, 1832, viz., one for the collecting and condensing into spirit of the vapour arising from bread in the process of baking, the use of which apparatus had been sanctioned by the Lords of the Treasury. Mr. Robert Hicks, of Wimpole Street, was the inventor of this remarkable method of producing alcohol. Although elaborate regulations were drawn up for the due safeguarding of the revenue and for the charging of the duty in connection with this fanciful method of spirit production, there is nothing to show that any practical use was ever made of it.

The Patent Still in General Use.

The official records show that the first patent stills were erected in Ireland, where there were three in use in 1829. The first one to be erected in Scotland was the "Stein" still at Kirkliston in 1832, to be followed by one at Cameron Bridge the following year, and one in Glasgow in 1833. The first patent still in England was erected at Brentford in 1836. The distillers in Ireland appear to have taken to the use of the still more readily than those in the other parts of the Kingdom; in 1840 13 distillers in Ireland used this class of still, while two only employed them in Scotland and five in England. It may be mentioned that malt only was used in the patent still distilleries in Scotland until 1835, when one distillery (at Leith) used raw grain; malt, however, continued to be used exclusively at some patent still distilleries for many years. It is of interest to note that for several years (1841-3) a "Stein" apparatus was worked with malt only at a distillery in Islay. From time to time patent stills were tried at various distilleries and discontinued, but by 1848 all the distilleries in England had patent stills in use, while in Scotland patent stills (four "Steins" and nine "Coffeys") were then being used at 13 distilleries; malt only, it may be mentioned, was used during the whole of that year at three and during part of the year at two of the 13. In Ireland patent stills were used in that year at 15 distilleries, at two of which during part of the year malt only was used. The use of the patent still about reaches high watermark in this year. In the year 1906-7 there were 30 distilleries with patent stills, against 37 in the year above referred to.

VII.

NUMBER OF DISTILLERIES HAVING PATENT STILLS in each year from 1827 to 1860, inclusive, classified according to the materials used.

Year.	Malt only.			Malt and Grain.			Malt and Grain with Sugar or Molasses.			Other Materials.		
	England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	England.	Scotland.	Ireland.
1827	—	—	—	—	—	—						
1828	—	—	—	—	—	1						
1829	—	—	—	—	—	3						
1830	—	1	—	—	—	2						
1831	—	2	—	—	—	3						
1832	—	2	—	—	—	3						
1833	—	3	—	—	—	12						
1834	—	3	—	—	—	12(1)						
1835	—	2	—	—	1	10						
1836	—	3	—	1	2	11						
1837	—	3	—	3	2	10						
1838	—	3	—	3	1	11(1)				Beet root		Potatoes
1839	—	1	—	4	2	11	—	—	—	1	—	1
1840	—	1	—	4	1	12(2)	—	—	—	—	—	1
1841	—	2	—	6	1	11(1)						
1842	—	2	—	6	1	12						
1843	—	2	—	6	1	9						
1844	—	1	—	6	3(1)	10						
1845	—	2	—	6	4	10						
1846	—	2	—	6	5(1)	12				Sugar		
1847	—	2	—	5	8(1)	11	2	1 *a*	1 *b*	1		
1848	—	2	—	8	11(4)	14(2)	—	—	1 *b*	2		
1849	—	2	—	8	11(2)	14(1)	—	—	—	Sugar and molasses 3		
1850	—	2	—	9	10(2)	16(1)	1	1	—			
1851	—	1	—	9	12(3)	14(1)	2 *b*(2)	—	—			
1852	—	1	—	8	5(3)	9	4 *b*(1)	6 *b*(6)	3*c*			
1853	—	1	—	9	6(2)	11(1)	3 *b*(1)	2 *b*(1)	1			
1854	—	1	—	7	5	11(1)	4 *b*(2)	6*b* (4)*d*	—	—	madder 1	
1855	—	1	—	5	4	10	5 *b*(3)	9 *b*(5)	1 *b*(1)	—	madder 1	
1856	—	1	—	8	9(1)	11	2 *b*(1)	6 *b*(3)	1	—	malt and molasses 1 madder 1	
1857	—	2	—	8	9(1)	12	2 *b*(2)	3 *b*(2)	1	—	madder 1	
1858	—	2	—	8	9	12	3 *b*(1)*e*	2	1	—	malt and molasses 1 madder 1	
1859	—	1	—	10	10	10	—	1 *b*	1	malt, grain, molasses and dari 1 rice 1		
1860	—	1	—	6	—	8	2 *b*(1)	11	—	rice and dari 1*b* rice 1		

NOTE—Of the distillers shown under Malt and Grain some occasionally used Malt only. The number of these is given in brackets.

(*a*) This distiller sometimes used Malt and Grain, and occasionally Malt only.

(*b*) At some of these distilleries—the number being indicated in brackets—sometimes Malt and Grain only was used.

(*c*) { One distiller occasionally used Malt only. / Two distillers „ „ Malt and Grain only.

(*d*) One distiller „ „ Malt only.

(*e*) At one of these distilleries mixed Grain and Rice was also used.

VIII.

RETURN OF PROOF GALLONS (KNOWN OR ESTIMATED) OF SPIRITS MADE FROM EACH DESCRIPTION OF MATERIALS FOR BOTH POT AND PATENT STILLS IN ENGLAND, SCOTLAND AND IRELAND RESPECTIVELY.

Prepared from the Annual Distillery Returns furnished to the Board of Inland Revenue in respect of each Distillery in the United Kingdom from 1827, when the Returns were first instituted, to the present time.

Year.	Description of Still.	Malt only.			Malt and Grain.			Potatoes.			Mangold Wurzel.			Rye.			Sugar.			Beet Root.		
		England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	England.	Scotland.	Ireland.
†1827	Pot		2,671,877	190,595	2,496,473	2,659,725	4,696,830	321														
1828	Pot		4,822,309	28,083	3,891,221	4,208,131	9,279,769															
„	Patent		—	—	—	—	9,045															
1829	Pot		5,216,625	19,452	3,804,581	4,832,130	9,153,509															
„	Patent		—	—	—	—	120,169															
1830	Pot		5,703,556 *(1)	182,398	4,603,980	3,890,493	8,412,444															
„	Patent		143,882	—	—	—	105,797															
1831	Pot		5,263,185	36,477	4,001,225	3,961,094	7,938,911															
„	Patent		293,231	—	—	—	312,189															
1832	Pot		4,801,179	79,359	3,725,199	2,916,793	8,637,456															
„	Patent		230,368	—	—	—	237,765															
1833	Pot		5,251,302 *(1)	26,855	4,196,442	3,331,452	8,060,072 *(1)															
„	Patent		333,726	—	—	—	1,289,536															
1834	Pot		5,667,042 *(1)	56,219	4,805,663	3,182,229	7,060,498															
„	Patent		264,064	8,898	—	—	1,658,575															

1835	Pot		5,706,154 *(1)	71,734	4,275,815	2,848,968	8,841,474 *(1)																
„	Patent		139,989	—	—	231,254	1,698,632																
1836	Pot		6,749,002	86,417	4,815,714	2,534,763	9,673,266 *(1)																
„	Patent		197,568	—	141,192	750,878	1,961,857																
1837	Pot		6,067,140	85,885	2,685,910 *(1)	2,372,740	8,793,921 *(1)																
„	Patent		111,809	—	1,938,686	571,054	1,961,414																
1838	Pot		6,089,451	105,170	3,057,409	2,663,786	8,849,474	—	—	—	377												
„	Patent		183,329	8,786	2,674,055	90,756	1,956,149																
1839	Pot		6,019,047	101,178	2,654,032	2,793,143	7,686,638																
„	Patent		132,337	—	2,922,854	777,624	2,016,831	—	—	453	—	—	—	—	—	—	—	—	—	486			
1840	Pot		5,815,502	123,534	2,608,880	2,457,262	6,896,158 *(1)	—	—	—	—	—	782	—	793								
„	Patent		153,797	28,081	3,256,833	516,699	1,804,433	—	—	399													
1841	Pot		5,790,525	73,509	1,805,931 *(2)	1,867,657	4,487,947																
„	Patent		235,641	11,076	4,187,345	663,176	1,513,181																
1842	Pot		5,665,863	51,483	1,190,681	1,149,476	3,898,871	—	—	1,907													
„	Patent		244,306	—	4,670,341	747,266	1,850,374																
1843	Pot		5,432,897	7,763	1,098,077	1,090,672	3,609,071 *(1)	—	—	15,373													
„	Patent		254,268	—	4,985,624	826,195	1,483,727																
1844	Pot		5,749,959 *(1)	12,803	916,480	996,342	4,258,772 *(1)																
„	Patent		194,123	—	4,569,802	1,202,269 A(1)	2,126,379																
1845	Pot		6,134,773 *(1)	38,866	1,015,151	1,206,508	5,388,434 *(2)																
„	Patent		458,180 A(1)	—	4,547,508 A(1)	1,372,083 A(1)	2,773,816																
1846	Pot		6,232,220	59,705	890,850	859,483	4,793,773 *(2)																
„	Patent		527,866	—	4,756,229 A(1)	1,923,929	3,440,261																
1847	Pot		5,006,443	22,932	868,130	427,310	3,152,649 *(1)	—	—	783	—	—	—	—	—	—	—	—	—	47,203	43,792		
„	Patent		800,185	—	4,537,304	2,314,035	2,729,753	—	—	—	—	—	—	—	—	—	—	—	—	69,306	1,206	11,529	

† The returns available for this year cover nine months only.
* At a number of Distilleries, indicated by the figure in brackets above the gallons, an unknown proportion of the produce was from Pot Still.
A At a number of Distilleries, indicated by the figure in brackets above the gallons, an unknown proportion of the produce was from Patent Still.

Return of Proof gallons (known or estimated) of Spirits made from each description of materials for both Pot and Patent Stills in England, Scotland and Ireland—*continued*.

Year.	Description of Still.	Malt only.			Malt and Grain.			Malt, Grain and Molasses.			Molasses			Sugar.			Potatoes.		Rice.	Madder Root.		Miscellaneous.
		England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	England.	Scotland	Ireland.	Scotland	Ireland.	England.	England.	Scotland	England.
1848	Pot		5,332,640	22,762	A(1) 788,244	346,440	4,703,059	—	—	—	—	—	—	—	—	463	—	139				
„	Patent		777,464	*(1) 30,884	4,756,663	3,087,975	*(3) 3,236,257	—	—	—	—	—	—	121,842	—	7,765						
1849	Pot		5,841,628	57,603	571,953	109,754	4,383,754									malt, grain						
„	Patent		645,631	*(1) 19,018	4,607,372	3,851,304	*(3) 3,248,682	—	—	—	126,326	—	—	21,960	—	and sugar 416,458						
1850	Pot		6,203,079	108,994	—	147,592	A(1) 5,236,296	—	—													
„	Patent		717,695	*(1) 33,300	*(1) 5,362,417	3,550,854	*(3) 3,233,691	also sugar 384,320	989,685													
1851	Pot		5,753,246	111,887	—	174,734	4,252,348	—														
„	Patent		583,926	*(1) 32,765	5,947,710	4,245,231	*(5) 3,721,653	83,458					malt and molasses									
1852	Pot		4,878,641	63,846	—	365,040	4,372,140	—	11,776	9,711	—	—	8,248									
„	Patent		*(1) 421,882	*(1) 35,079	4,403,768	*(1) 1,616,877	*(4) 3,221,844	105,680 also sugar 1,033,096	*(1) 2,032,169 also sugar 315,502	253,722	—	—	—	malt, grain and sugar 757,434									
1853	Pot		A(1) 5,345,817	49,452	—	376,350	4,556,242	—	—													
„	Patent		*(1) 428,700	*(1) 36,726	6,347,525	*(1) 3,344,621	*(4) 4,050,896	130,776 also sugar 1,042,154	559,986	167,840												
1854	Pot		4,351,745	45,319	—	352,758	3,915,825	—	also sugar													
„	Patent		260,743	*(1) 16,000	5,394,478	2,463,330	*(5) 4,131,795	also sugar 171,007	93,056 also sugar					malt, grain and sugar								
1855	Pot		4,704,452	59,220	—	50,923	4,233,539	844,451 —	2,203,897	—	—	—	—	161,159 malt, grain	—	—	—	—	—	—	5,394	
„	Patent		264,779	—	4,950,234	2,191,106	*(4) 4,453,806	349,194 also sugar	3,860,643 also sugar	also sugar	—	—	—	and sugar 1,851,880	—	—	—	—	—	—	901	
1856	Pot		4,573,663	36,097	—	25,533	A(2) 4,269,428	1,150,964 —	522,915 —	112,707 —	—	malt and	—	—	—	malt, grain and sugar 174,239	—	—	—	—	—	
„	Patent		195,530	—	6,944,710	*(1) 5,229,230	*(3) 3,320,525	370,658 also sugar 124,302	1,250,802	407,621	—	molasses 285,177 31,717	—	—	—	—	—	—	—	—	447	
1857	Pot		5,469,294	30,547	—	47,581	A(3) 5,181,767	—														
„	Patent		428,708	—	*(1) 8,691,467	5,410,426	*(3) 4,179,746	149,158	2,076,957	547,102	—	17,488 also malt	—	—	—	—	—	—	—	—	2,032	

1858	Pot	5,143,668	31,952	—	117,701	A(3) 4,885,167	—	—	—	—	A(1) 221,014		malt, grain and sugar					grain and rice				
„	Patent	181,924	—	5,422,271	4,511,629	*(3) 3,472,805	395,196 also rice 16,049	2,168,298	435,162	—	— also malt and sugar	—	1,091,507	—	—	—	—	17,675	—	643		
1859	Pot	5,434,067	136,541	—	34,366	A(1) 4,155,698	—	—	—	—	A(1) 432,946											malt, grain and dari
„	Patent	80,888	—	6,520,654	6,982,554	*(4) 2,851,539	also dari 76,176		also sugar 303,216	—	31,951	—	—	—	—	—	—	123,862	—	—		141,877
1860	Pot	5,017,525	122,556	—	—	A(1) 3,999,630	—	A(1) 685,662										232,599 also dari				
„	Patent	85,565	—	6,643,866	—	*(4) 2,299,001	also sugar 571,919	6,800,913	—	—	—	—	—	—	—	—	—	563,210				
1861	Pot	3,418,719	—	—	272,867	A(2) 2,130,756	—	—	—	—	7,200											
„	Patent	*(2) 490,729	—	6,903,469	5,310,930	*(5) 2,155,356	—	—	—	310,650	1,606,500	16,050	48,600	600								
1862	Pot	4,155,250	—	—	—	2,138,972																
„	Patent	*(1) 550,529	*(1) 48,606	6,922,537	*(2) 6,055,408	*(6) 2,136,772	—	—	—	454,850	2,631,600	22,650	37,800	52,000								
1863	Pot	4,632,666	—	—	3,200	A(1) 2,079,926																
„	Patent	*(2) 559,027	—	7,154,250	*(2) 6,520,302	*(5) 1,953,836	—	—	—	309,060	1,357,515	10,192	210	22,070								
1864	Pot	5,251,628	A(1) 7,377	—	184,255	A(1) 2,897,966	—	—	—	—	12,795	—	—	1,020								
„	Patent	*(2) 734,618	—	8,150,266	*(1) 8,296,972	*(5) 2,258,958	—	—	—	40,327	28,387	—	11,470	—	—	555						
1865	Pot	4,993,936	42,423	—	132,294	A(1) 3,651,431																
„	Patent	*(2) 282,392	33,062	7,614,235	*(1) 8,126,232	*(5) 1,867,642	—	—	—	13,230	147,622	—	410	24,320	—	175						
1866	Pot	5,138,245	66,824	—	15,167	A(1) 4,060,345																
„	Patent	*(2) 684,109	16,581	7,446,221	*(2) 6,015,804	*(5) 1,824,184	—	—	—	126,690	395,797	—	43,310	3,700	—	87	—	—	31,090			
1867	Pot	4,767,457	68,732	—	10,806	3,508,956																
„	Patent	*(2) 615,572	—	6,918,286	*(2) 5,325,373	*(4) 1,802,974	—	—	—	293,895	348,952	—	28,910	5,730	—	—	—	—	58,067			

* At a number of Distilleries, indicated by the figure in brackets above the gallons, an unknown proportion of the produce was from Pot Still.

A At a number of Distilleries, indicated by the figure in brackets above the gallons, an unknown proportion of the produce was from Patent Still.

Return of Proof gallons (known or estimated) of Spirits made from each description of materials for both Pot and Patent Stills in England, Scotland and Ireland—*continued.*

Year.	Description of Still.	Malt only			Malt and Grain.			Molasses.			Sugar.			Potatoes.	Rice.		Beet Root.	Madder Root.	Dates.		Miscellaneous.	
		England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	Scotland.	England.	Scotland.	England.	England.	England.	Scotland.	England.	Scotland.
1868	Pot		4,809,609 *(2)	56,400	—	11,105 *(4)	3,949,893 *(4)															
,,	Patent		579,510	—	6,760,912	5,212,488	2,095,904	323,542	555,495	—	490	910	—	6,705	—	—	—	75,566				starch 1,620
1869	Pot		5,914,825 *(1)	11,063 *(1)	—	5,548 *(4)	3,987,620 *(4)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
,,	Patent		628,802	70,390	6,777,208	6,549,565	2,313,525	363,952	295,870	—	—	9,450	—	1,365	—	—	—	33,185				
1870	Pot		5,962,964 *(1)	51,431 *(1)	—	6,070 *(3)	4,167,559 *(6)															
,,	Patent		700,251	264,824	7,028,158	7,316,916	2,861,659	423,157	574,365	—	—	10,620	—	990	—	—	*(1) 42,632	74,998				
1871	Pot		5,420,071	57,809 *(1)	—	455,940 *(6)	5,130,196 *(5)															
,,	Patent		91,178	324,262	6,731,474	7,336,737	3,699,948	644,377	378,675	—	11,650	1,880	—	—	—	—	*(1) 61,732	116,757				
1872	Pot		5,149,120 *(1)	68,531	—	801,972 *(5)	5,865,822 *(6)															
,,	Patent		554,214	—	7,489,374	7,553,958	4,632,837	655,132	1,037,610	—	8,280	—	—	—	—	—	*(1) 56,026	115,601				
1873	Pot		5,544,307	69,193	—	413,374 *(7)	5,909,530 *(6)															
,,	Patent		97,412	—	8,389,919	9,171,810	4,685,177	856,605	941,557	—	—	—	—	—	—	—	*(1) 110,919	74,906				
1874	Pot		5,602,670	63,078	—	337,798 *(7)	4,954,256 *(5)	—	—	—	—	100										
,,	Patent		101,652	—	8,706,466	9,520,257	4,007,259	951,607	697,507	—	—	96,980	—	—	—	—	*(1) 25,600	106,820	59,283	3,136		
1875	Pot		6,274,357	4,044	—	323,831 *(7)	6,138,552 *(7)	—	—	—	—	290										
,,	Patent		113,958	—	8,880,421	9,881,902	4,515,945	524,868	199,926	—	32,450	5,550	—	—	—	—	—	92,004	6,718			
1876	Pot		6,715,464	81,198	—	1,595,153 *(8)	6,534,546 *(7)															
,,	Patent		748,401	—	8,445,110	8,261,144	4,451,033	998,022	297,540	—	200	—	—	—	81,971	—	*(1) 31,092	62,904				
1877	Pot		7,162,472	80,164	—	— *(9)	7,153,197 *(6)															
,,	Patent		98,776	—	8,239,916	11,380,982	4,565,014	1,160,150	310,869	—	—	—	—	—	562,716	—	—	27,950	40,207 locust beans 1,400			

1878	Pot		3,300,202	78,672	—	145,698 *(9)	7,618,419 *(5)														
„	Patent		101,876	—	8,414,362	14,091,111	3,635,293	1,126,386 also dates 8,805	163,626	—	—	—	—	—	—	—	—	9,182	47,493 locust beans 140 currants 89,592	16,825	
1879	Pot		7,174,552	74,934	—	1,659,958 *(9)	7,741,827 *(5)											also molasses			
„	Patent		565,812	—	8,472,703	6,762,901	4,396,128	1,239,234	345,660	798	—	—	—	—	66,483	9,702	—	10,907	23,998		
1880	Pot		6,473,582	66,238	—	28,528 *(7)	5,764,800 *(4)											also molasses			
„	Patent		69,227	—	8,596,038	9,185,344	4,071,880	1,224,696	514,044	—	—	—	—	—	—	84,117	—	7,031	—	1,062 currants 1,368	
1881	Pot		7,601,557	72,880	57,634	47,000 *(7)	5,608,985 *(4)														
„	Patent		416,397	—	9,179,054	9,873,617	3,738,318	982,314	344,622	1,410	1,030	—	2,070	—	190,726	—	—	169			
1882	Pot		7,593,816 *(1)	89,777	53,023	86,697 *(5)	5,400,504 *(4)														
„	Patent		451,548	—	8,774,435	10,990,125	3,976,621	764,472	228,702	—	2,370	—	—	547	842,782	52,453	—	—	8,271			
1883	Pot		8,488,656 *(1)	56,392	— *(1)	— *(5)	5,227,112 *(4)														locust beans
„	Patent		414,263	—	8,249,267	9,635,211	3,971,092	804,864	256,914	—	—	—	—	—	1,129,237	315,346	—	—	—	—	—	1,200
1884	Pot		9,276,481	59,655	— *(1)	— *(6)	6,346,264 *(4)														
„	Patent		106,036	—	7,527,448	10,986,192	3,260,388	1,426,092	399,522	—	37,820	—	—	—	1,660,824						
1885	Pot		8,653,555	109,472	— *(1)	34,973 *(6)	5,730,520 *(4)														
„	Patent		98,991	—	8,109,834	10,155,666	4,590,308	1,572,798	473,724	—	33,950	4,490	—	—	1,055,331						
1886	Pot		7,498,409	65,404	— *(1)	— *(6)	5,685,419 *(5)														
„	Patent		96,926	—	8,314,442	9,318,864	4,588,357	719,694	288,750	—	1,000	122,550	—	—	691,173						
1887	Pot		7,384,810	141,927	— *(2)	470,691 *(6)	5,788,071 *(5)	—	78,588											Manioca	
„	Patent		95,808	—	8,507,033	9,395,729	5,274,393	1,115,184	134,880	—	1,650	198,820	—	—	76,784	—	—	—	—	—	374

* At a number of Distilleries, indicated by the figure in brackets above the gallons, an unknown proportion of the produce was from Pot Still.

Return of Proof gallons (known or estimated) of Spirits made from each description of materials for both Pot and Patent Stills in England, Scotland and Ireland—*continued.*

Year	Description of Still.	Malt only.			Malt and Grain.			Molasses.		Sugar.			Rice.		Dari.	Glucose.	Saccharum.	Miscellaneous.	
		England.	Scotland.	Ireland.	England.	Scotland.	Ireland.	England.	Scotland.	England.	Scotland.	Ireland.	England.	Ireland.	England.	England.	Scotland.	England.	Scotland.
1888	Pot	—	6,933,548	172,136	—	94,416	5,380,193												
,,	Patent	—	88,647	—	*(2) 7,722,633	*(6) 10,849,913	*(5) 5,539,540	1,248,954	14,772	—	383,170	—	473,489	—	79,879				
1889	Pot	—	7,313,976	189,774	—	53,751	5,555,990												
,,	Patent	—	82,207	—	*(2) 7,419,854	*(5) 11,641,851	*(5) 5,659,023	1,257,012	11,772	—	311,520	—	363,642	—	68,514				
1890	Pot	—	7,743,673	209,915	—	—	5,868,992												
,,	Patent	—	89,594	—	*(2) 8,248,681	*(5) 12,514,595	*(4) 6,382,460	1,042,002	13,236	930	3,600	—	264,555	—	—	—	211,133		
1891	Pot	85,449	8,531,034	260,566	—	80,733	5,542,908												
,,	Patent	—	22,977	—	*(2) 8,250,327	*(6) 12,408,175	*(5) 7,858,340	1,746,762	8,238	82,340	84,960	—	639,242	—	439,854	—	82,269	barley meal 540	
1892	Pot	58,621	8,446,675	256,789	—	354,835	6,042,703												
,,	Patent	—	93,339	—	*(3) 7,582,738	*(5) 10,784,042	7,674,294	2,567,040	41,130	84,240	146,780	—	165,198	—	1,011,484	—	—	barley meal 100	
1893	Pot	48,830	8,975,001	266,875	—	81,013	5,896,519	—	—	—	—	—	—	—	—	—	—	grape must 25,521 millet seed 997	
,,	Patent	2,376	*(1) 158,785	—	*(3) 6,767,865	*(4) 10,906,586	*(5) 7,652,985	2,424,474	34,188	*(1) 65,910	—	—	230,958	—	713,417	30,013	92,625	cockle seed 481 honey 161	
1894	Pot	39,199	9,712,937	251,961	—	349,044	5,494,184	—	—	—	—	—	—	—	—	—	—	grape must 38,392	
,,	Patent	—	90,380	—	*(4) 5,812,214	*(5) 11,954,223	*(5) 7,398,069	2,446,788	13,122	—	—	—	392,401	—	272,022	963,228	93,480		
1895	Pot	45,170	10,293,351	83,577	—	44,222	5,110,749	—	—	—	—	—	—	—	—	—	—	grape must 1,450	
,,	Patent	2,261	72,358	—	*(4) 6,515,020	*(5) 12,283,122	*(5) 7,304,622	3,459,330	6,096	71,520	8,540	—	363,547	—	40,675	15,531	70,759		
1896	Pot	4,103	12,014,696	74,738	—	—	5,972,267												

,,	Patent	165	75,695	—	*(3) 6,797,008	*(5) 14,234,816	*(5) 8,548,351	4,253,988	8,322	38,480	—	100	214,962	—	1,738	47,208			
1897	Pot	43,158	13,979,437	133,500	—	81.715	4.904,651												
,,	Patent	—	92,905	—	*(3) 7,766,337	*(6) 17,300,084	*(7) 9,862,147	4,385,370	14,628	60	—	—	43,318	—	—	80,413			
1898	Pot	46,104	15,704,758	220,060	—	105,537	4,488,024												
,,	Patent	—	91,698	—	*(4) 7,717,108	*(6) 18,613,178	*(7) 10,010,226	4,782,096	8,964	51,839	—	—	8,694	—	—	32,096	—	starch 2,493	
1899	Pot	—	13,171,203	73,486	—	—	4,252,481												
,,	Patent	—	84 319	—	*(4) 8,368,611	*(7) 20,784,818	*(8) 10,171,388	4,644,744	—	1,950	—	—	—	—	—	91,904			
1900	Pot	—	10,398,231	80,730	—	—	4,055,752												
,,	Patent	—	83,812	—	*(4) 8,632,446	*(6) 20,334,099	*(8) 10,390,616	3,863,052	—	2,550	—	—	—	—	—	82,958			
1901	Pot	—	10,416,599	99,465	—	53,687	3,737,119												
,,	Patent	—	85,296	—	*(4) 7,706,043	*(6) 19,767,713	*(8) 9,718,211	5,062,248	—	7,190	—	—	—	—	—	70,366			
1902	Pot	—	10,433,009	65,092	—	—	3,277,794												
,,	Patent	—	78,323	—	*(4) 7,055,337	*(6) 17,774,077	*(9) 9,530,589	4,269,594	—	95,880	—	—	152,730	135	—	5,376			
1903	Pot	—	10,422,940	75,817	—	—	2,989,654												
,,	Patent	—	70,469	—	*(4) 6,505,053	*(6) 15,662,204	*(9) 9,367,116	4,991,700	—	85,000	—	—	226,237						
1904	Pot	—	11,416,734	96,042	—	—	3,133,863												
,,	Patent	—	*(1) 72,945	—	*(4) 6,803,274	*(5) 14,883,871	*(9) 9,612,188	5,128,260	—	51,980	—	—	1,170						
1905	Pot	—	11,432,827	162,527	—	—	3,181,498												
,,	Patent	116	60,527	—	*(4) 6,637,304	*(4) 12,586,298	*(8) 8,797,108	5,853,402	—	6,560	—	—	—	—	—	28,921	—	sago 300	
1906	Pot	—	10,877,754	242,710	—	—	3,324,614												
,,	Patent	—	503,776	—	*(4) 6,938,543	*(3) 12,559,216	*(8) 8,845,347	5,895,414	—	3,450	—	—	—	—	—	24,385	—	sago 18,855	
1907	Pot	—	10,487,685	279,728	—	—	3,313,446												
,,	Patent	—	*(1) 399,547	—	*(4) 7,088,677	*(2) 14,339,836	*(7) 8,372,607	6,393,054	—	20	—	—	7,125	—	—	3,427	—	sago 26,947 tapioca 10,447	malt extract 490

* At a number of Distilleries, indicated by the figure in brackets above the gallons, an unknown proportion of the produce was from Pot Still.

APPENDIX U.

MEMORANDUM BY DR. G. S. BUCHANAN, 24th APRIL, 1909.

The following memorandum relates to certain matters which have been referred to in the course of the Commission's inquiry, and is submitted in the hope that it may be useful to my colleagues in considering certain aspects of the subject which they have been investigating.

THE SALE OF FOOD AND DRUGS ACTS.

The Acts referred to collectively as the Sale of Food and Drugs Acts, 1875 to 1907, comprise:—

The Sale of Food and Drugs Act, 1875 (the principal Act).
The Sale of Food and Drugs Act Amendment Act, 1879.
The Margarine Act, 1887.
The Sale of Food and Drugs Act, 1899.
The Butter and Margarine Act, 1907.

A large number of judicial decisions have been given in cases arising out of these Acts, which, of course, largely govern their application

Local Authorities Administering the Acts.

These are, in England and Wales, the councils of:—

61 Administrative counties
74 County boroughs.
29 Metropolitan boroughs, including the City.
69 other boroughs.

Each of these 233 authorities is empowered to appoint one or more public analysts. Various local authorities which do not appoint analysts (*e.g.*, urban district councils) are empowered to take samples and to send them to the county public analyst.

In Scotland, according to the reports of the Local Government Board for Scotland, there are 197 authorities (33 counties and joint committees and 164 burghs) by whom these Acts are administered.

In Ireland, according to the report of the Board of Agriculture and Technical Instruction, the county councils of the 33 administrative counties, and the town councils of 11 boroughs are primarily charged with the duty of enforcing the Sale of Food and Drugs Acts.

Public Analysts.

For England and Wales the number of public analysts appointed under these Acts is at present 120. In many instances a public analyst acts for more than one district. In a few instances a single district has two or more public analysts. The appointment and qualifications of public analysts are subject to the control of the Local Government Board in the manner provided by Section 10 of the Act of 1875, and Section 3 (5) of the Act of 1899. Public analysts are sometimes salaried officers, in a few cases giving their whole time to official work; more usually they are paid per sample analysed, at rates which vary considerably in different districts. There appear to be 18 public analysts in Scotland and 6 in Ireland.

Sampling.

Local administration of these Acts is primarily based on powers conferred on certain officers of local authorities to obtain (on payment) samples of food or drugs, and to submit such samples to be analysed by the public analyst of the district (1875 Act, Section 13). Decision as to the nature and number of samples to be taken and as to methods of sampling rests, of course, ultimately with the local authority; in some instances the sampling officers are inspectors of nuisances or sanitary inspectors who are employed in the public health department and act in this as in other matters under the instructions of the medical officer of health; in other districts they are police officers who act under the instructions of the chief constable; sometimes they are inspectors of weights and measures or of markets. Certain procedure has to be closely followed in sampling if a prosecution under the Acts is to be rendered possible after an adverse report has been received from the public analyst (Section 14). All samples in this case must be divided at the time of purchase into three parts. One of these parts is kept available as a reference sample which in cases of dispute can be sent by the direction of the magistrate to the Government Laboratory (1875 Act, Section 22; 1899 Act, Section 21). The practice of taking samples without the formalities prescribed by the Act, or stating that they are purchased for analysis, is largely adopted by some local authorities for administrative purposes.

Public Analysts' Certificates and Reports.

The public analyst's certificate in respect of each sample is required by Sec. 18 of the Act of 1875 to be in the form or to the effect of the schedule to that Act: it should declare the result of the analysis to be that the analyst is of opinion that the sample is "genuine" or otherwise that it contains certain stated parts or percentages of foreign ingredients. In addition to these certificates, which are sent to the inspector or other person who has purchased the sample for analysis, the public analyst reports quarterly to the local authority. Copies of these quarterly reports are required to be forwarded to the Local Government Board.

The information given in these reports as regards England and Wales is tabulated and commented on by the Local Government Board in their annual reports. As an example, I have annexed (A) a reprint of the portion of the Board's annual report for 1907-8, which deals with this subject.* It should be observed that in the tables there given the samples recorded as "adulterated or not up to standard" have usually been so tabulated in consequence of an adverse opinion, such as "adulterated," being expressed by the public analyst, or of facts supplied by him in his report. They include samples which have been taken informally, and do not necessarily represent offences which could be made the subject of prosecution. In considering the figures given in these tables, it must not be inferred that the analyses which have been made by different analysts in the case of a given article have necessarily been comparable in their nature or extent.

Offences and Prosecutions.

The principal offences which are punishable under the Acts are created by Sections 3 to 9 of the Act of 1875. Section 3 of that Act is as follows:—

> No person shall mix, colour, stain, or powder, or order or permit any other person to mix, colour, stain, or powder, any article of food with any ingredient or material so as to render the article injurious to health, with intent that the same may be sold in that state, and no person shall sell any such article so mixed, coloured, stained, or powdered, under a penalty in each case not exceeding fifty pounds for the first offence; every offence, after a conviction for a first offence, shall be a misdemeanour, for which the person, on conviction, shall be imprisoned for a period not exceeding six months with hard labour.

Prosecutions under this section, which entail proof that the article of food in question has been so mixed, etc., as to render that article injurious to health, are comparatively rare.

Sec. 6 of the Act of 1875 is as follows:—

> No person shall sell to the prejudice of the purchaser any article of food or any drug which is not of the nature, substance, and quality of the article demanded by such purchaser, under a penalty not exceeding twenty pounds; provided that an offence shall not be deemed to be committed under this section in the following cases, that is to say:—
>
> (1) Where any matter or ingredient not injurious to health has been added to the food or drug because the same is required for the production or preparation thereof as an article of commerce, in a state fit for carriage or consumption and not fraudulently to increase the bulk, weight, or measure of the food or drug, or conceal the inferior quality thereof;
>
> (2) Where the drug or food is a proprietary medicine, or is the subject of a patent in force, and is supplied in the state required by the specification of the patent;
>
> (3) Where the food or drug is compounded as in this Act mentioned;
>
> (4) Where the food or drug is unavoidably mixed with some extraneous matter in the process of collection or preparation.

* Not reprinted in this Volume. The extract referred to may be purchased, either directly or through any Bookseller, from Wyman and Sons, Ltd., Fetter Lane, E.C.; or Oliver & Boyd, Tweeddale Court, Edinburgh; or E. Ponsonby, 116, Grafton Street, Dublin. Price Fourpence.

In the case of mixtures, the vendor may be protected if a label is given by Section 8 of the Act of 1875:—

> Provided that no person shall be guilty of any such offence as aforesaid in respect of the sale of an article of food or a drug mixed with any matter or ingredient not injurious to health, and not intended fraudulently to increase its bulk, weight, or measure, or conceal its inferior quality, if at the time of delivering such article or drug he shall supply to the person receiving the same a notice, by a label distinctly and legibly written or printed on or with the article or drug, to the effect that the same is mixed.

A further provision on this subject is made by Section 12 of the Act of 1899, which enacts:—

> The label referred to in Section 8 of the Sale of Food and Drugs Act, 1875, shall not be deemed to be distinctly and legibly written or printed within the meaning of that section unless it is so written or printed that the notice of mixture given by the label is not obscured by other matter on the label: provided that nothing in this enactment shall hinder or affect the use of any registered trade mark, or of any label which has been continuously in use for at least seven years before the commencement of this Act; but the Comptroller-General of Patents, Designs, and Trade Marks shall not register any trade mark purporting to describe a mixture unless it complies with the requirements of this enactment.

The great majority of the proceedings taken under the Sale of Food and Drugs Acts are instituted under Sec. 6 of the 1875 Act. Proof of offence under this section depends upon a variety of considerations, to which several witnesses before the Commission have referred, *e.g.*, the nature of the demand made; the existence of a statutory requirement in regard to the composition of the article demanded, or of a general acceptance of what is signified by the article demanded; proof of observance of formalities of procedure; wording of analyst's certificate, and so on.

Where proceedings are taken by officers of local authorities the provisions of Section 14 must be strictly complied with. The official purchaser must after the purchase has been completed notify to the seller or his agent his intention to have the sample analysed by the public analyst, and it appears to have been decided by the Courts that the notification must be given and an analysis actually made by the public analyst, even if the fact of adulteration is admitted at the time of the sale.

By Section 20 the officer of the local authority is authorised to take proceedings "when the analyst, having analysed any article, shall have given his certificate of the result, from which it may appear that an offence against some one of the provisions of this Act has been committed." It seems to have been held that the analyst's certificate is a condition precedent to a public prosecution.

Public Analysts' Certificates and Reports in Regard to Spirits.

Below is given the number of samples of spirits of all kinds submitted to public analysts in England and Wales during 1901-1907, and the number which, according to the information and classification available to the Local Government Board, were "adulterated or not up to standard":—

Year.	Total samples of spirits submitted.	Total samples reported as adulterated or not up to standard.
1901	5,068	652
1902 ..	6,291	775
1903	6,936	817
1904	6,938	832
1905	5,582	643
1906	5,545	586
1907	5,494	510

The extent to which spirits were sampled in different districts varied considerably during the seven years in question. No samples of spirits were examined during this period in the county of Oxford, in five county boroughs, including Leeds and Huddersfield, or in ten other boroughs.

Watering.

It may safely be assumed that in the case of the large majority of the above samples the examination made by the public analyst was confined to the determination of alcoholic strength. Statutory "limits" in this matter were prescribed by Section 6 of the Sale of Food and Drugs Act Amendment Act, 1879:—

> In determining whether an offence has been committed under Section 6 of the said Act by selling, to the prejudice of the purchaser, spirits not adulterated otherwise than by the admixture of water, it shall be a good defence to prove that such admixture has not reduced the spirit more than 25 degrees under proof for brandy, whiskey, or rum, or 35 degrees under proof for gin.

The existence of these statutory limits, and the facility with which the alcoholic strength of spirits can be determined, are no doubt largely responsible for the comparatively large number of samples of spirits which are taken for examination under the Acts.

In England and Wales, during the last three years for which returns are available, 1905-7, dilution with water below official limits was reported by public analysts in 173 samples of brandy, in 943 of whiskey, in 250 of rum, and in 225 of gin. Proceedings were instituted in a large number of these cases, and penalties imposed which ranged from 2s. 6d. to £20.

The control exercised under the Acts in regard to dilution of spirits below the limits laid down in Section 6 of the Act of 1879 does not extend to spirits sold in bottles which carry on the label a declaration of greater dilution, and is also considerably affected by the employment of notices commonly exhibited at public-house bars, etc., to the effect that the strength of spirits sold is not guaranteed.

The following observations on this subject in the annual reports of the Local Government Board for 1905-6 and 1906-7 may be quoted:—

Extract from 1905-6 report.—"The percentage of spirits condemned in 1905, viz., 11·5, is the lowest on record. It does not, however, necessarily follow that spirits are being sold either purer or stronger than formerly. Here, again, the practice of working down to the standard appears to prevail, a large proportion of the samples reported upon being just above or just below the limits fixed by Section 6 of the Sale of Food and Drugs Act Amendment Act, 1879. The analyst for the County of Kent, who has for many years recorded the strength of each sample of spirits analysed by him, reports that in the ten years 1893 to 1902 he examined 4,285 samples, but while in that period the certified rate of adulteration of spirits in Kent was reduced from 15 per cent. to 8·8 per cent., the average strength of the samples of spirits analysed by him in the following year, 1903, was less by 3·44 degrees of proof spirit than the corresponding average strength for 1893. The practice of placing in the bars of licensed houses notices that all spirits sold in the establishment are diluted has extended considerably in late years. In Finsbury about 32 per cent. of the publicans are said to exhibit the notices. In West Suffolk the percentage is 49 and in Dorset it is 73. It is said that many of these notices are not readily visible to the public, and that when they are seen their legal significance is probably not often fully appreciated."

Extract from 1906-7 report.—"Particulars of the 5,545 samples of spirits taken for analysis during the year are given in the table on page 238 of the appendix. The rate of adulteration in 1906 is the lowest on record, but in this connection the exhibition of notices, referred to above, should be remembered, as also the different practice of analysts in regard to the examination and classification of samples of spirits submitted to them."

Reports by Public Analysts on the Presence of Silent Spirit, Grain Spirit, etc.

(a) In Brandy.

During the last few years many samples of brandy obtained under the Acts have been examined by public analysts with a view to ascertaining whether they appeared to be products derived from the distillation of wine, or had been mixed with grain spirit or different forms of "silent spirit," or consisted of silent spirit flavoured and coloured. Examinations for this purpose by public analysts in England and Wales appear to have become relatively frequent about 1902, and resulted from the public attention which was then being directed to the subject of brandy adulteration and to the proceedings instituted in Lanarkshire in that year (*cf.* Dr. Wilson's evidence to the Commission). In 1904, as stated in Mr. Bramall's evidence, the Islington Borough Council instituted proceedings

in the case of a sample of brandy reported to contain 65 per cent. of spirit not derived from grape, and a conviction was obtained, the defendant being fined £5 and £50 costs (Islington Borough Council *v.* Hillyer). In the same year, in seven other cases in Islington, in which the percentage of spirit reported as not derived from the grape varied from 50 to 75, the summonses were dismissed on payment of the costs. In 1905 proceedings were instituted by the Kensington Borough Council in respect of two samples of brandy reported by the public analyst to contain quantities estimated at 53 and 58 per cent. respectively of spirit not derived from the grape. The magistrate imposed a penalty of £5 and costs in each case. The defendants appealed against this decision, but the Court of Quarter Sessions dismissed the appeal (Kensington Borough Council *v.* Prior).

These London cases no doubt influenced certain English local authorities and public analysts in proceeding on similar lines. The extent to which samples of brandy have been examined for the purpose in different districts, or by different analysts, cannot, however, be stated, as public analysts' reports do not ordinarily give this information. The presence of spirit "not derived from distillation of wine," or of spirit which "does not appear to be genuine brandy" or which was "deficient in esters" or other constituents of genuine brandy has, however, been reported in several districts in England and Wales since 1904. These districts include the counties of Lancashire, East Riding, Lincoln (Lindsey), and ten other counties; 14 boroughs, including Croydon, Preston, and Liverpool; and four Metropolitan boroughs, in addition to Islington and Kensington.

As regards the amount of silent spirit reported in the brandy samples, it may be noted that among the higher estimates are 50 to 100 per cent. in Lincoln (Lindsey), 50 to 75 per cent. in the borough of Nottingham, 45 to 94 per cent. in County Salop, 33 to 60 per cent. in Oxford Borough, Scarborough Borough 40 to 51 per cent., Chepping Wycombe 82 per cent., County Durham 25 to 85 per cent., Lincoln (Kesteven) 60 to 72 per cent., etc.

In the majority of these brandies it appears from the information supplied to the Board that (following a usual practice under the Acts) the case was considered to be sufficiently met by giving a warning or a caution to the vendor. In other cases the authority decided that no action was desirable. The reports show that fines have been imposed, on conviction, in 33 cases during the three years 1905-7. The fines have ranged from 1s. to £20. In a total of 13 cases the prosecution appears to have failed or been withdrawn.

(*b*) *Rum.*

In 1906 the Public Analyst of Fulham reported five cases where Jamaica rum was deficient in esters; no prosecutions were instituted in these cases. In Lancashire in the same year one sample of Jamaica rum was reported to consist of whiskey coloured and flavoured to imitate rum, and another sample of Jamaica rum to be flavoured spirit other than true Jamaica rum. In Liverpool in 1905, one sample was reported as a mixture of whiskey and rum, one as probably a mixture of rum and grain spirit, and one as probably containing a considerable proportion of neutral spirit; in 1906, one sample was reported as being a flavoured spirit other than rum; and in 1907 one sample of Jamaica rum was reported to consist of Demerara rum. The Public Analyst for Eastbourne reported one sample of rum in 1906 as having the composition of silent spirit.

(*c*) *Gin.*

No reference appears in public analysts' reports to adulteration of gin, otherwise than by the addition of water.

(*d*) *Whiskey.*

The action taken by the Islington Borough Council in 1906 has been fully reported to the Commission. The appeal in this case to Quarter Sessions and the subsequent appointment of the Commission no doubt account for the fact that no action has been taken in other districts where spirits similar to those in the Islington cases have been supplied as Scotch or Irish whiskey. In this instance also the information available from public analysts' reports does not show how far samples of whiskey submitted to the public analyst have been examined from this point of view. Comparatively few cases are referred to in public analysts' reports. The presence of patent still spirit in greater or less amount has been reported during the last three years in samples of whiskey submitted to the public analysts of Lancashire, Preston, Finsbury, and Islington.

Classification of Samples of Spirits in the Annual Reports of the Local Government Board.

It should be said that where the analyst has reported against a sample of "brandy" as not being a spirit having the characteristics of brandy obtained from the distillation of wine, the sample has been included in the Board's Reports in the column "adulterated or not up to standard." Samples of this kind, which appear to have been purchased as "British brandy," are, however, not included in this column. In regard to whiskey, the Board's Annual Report for 1907-8 stated: "In the present returns a number of whiskies reported by certain analysts to contain patent still spirit have been included among the genuine samples irrespective of the proportion in which patent still spirit is stated to be present."

ACTION BY THE LOCAL GOVERNMENT BOARD IN RELATION TO THE SALE OF FOOD AND DRUGS ACTS.

In relation to these Acts, the only express duty imposed on the Local Government Board prior to the Act of 1899 was under Sections 10 and 19 of the Sale of Food and Drugs Act, 1875. Under Section 10 the appointments and removals of public analysts made by the authorities specified in the section are subject to the Board's approval. The Board are empowered to require satisfactory proof of competency to be sent to them, and they may give their approval absolutely, or with modifications, as to the period of the appointment and removal, or otherwise. If local authorities fail to appoint public analysts as required by Section 10, the Local Government Board are empowered to require them to make the necessary appointment. Under Section 19 of the same Act, every analyst is required to report quarterly to the authority appointing him the number of articles analysed by him under the Act, during the foregoing quarter, and to specify the result of such analyses and the sum paid to him in respect thereof. Such report is to be presented at the next meeting of the authority appointing the analyst, and every such authority is required annually to transmit to the Local Government Board, at such time and in such form as the Board shall direct a certified copy of such quarterly Report.

At the Local Government Board the practice has been followed for many years of tabulating public analysts' reports, addressing communciations to local authorities who appear not to have adequately carried out the provisions of the Acts, making suggestions to them from time to time as to what they should do, and addressing remonstrances to them when they fail to do it. It is also the practice of the Board to inquire in what cases proceedings have been taken for offences against the Acts and to ascertain where possible the amounts of fines and costs which are inflicted by magistrates. Information obtained in this way is illustrated in the specimen report appended (A.). The subject of the administration of the Sale of Food and Drugs Acts, so far as the Local Government Board is concerned, will be found fully explained in the evidence given by Mr. Preston Thomas before the Select Committee of the House of Commons on Food Products Adulteration in 1894 (see page 1 of the evidence appended to the report of that Committee (Cd. 253 of 1894)), and later by Mr. J. Lithiby, in March, 1903, before the Royal Commission on Arsenical Poisoning (see page 136 of the Second Volume of Evidence (Cd. 1869 of 1903)).

By the Sale of Food and Drugs Act, 1899, the powers of the Local Government Board were enlarged in certain directions, and powers were also given to the Board of Agriculture.

Section 2 of the Act of 1899 provides as follows:—

> (1) The Local Government Board may, in relation to any matter appearing to that Board to affect the general interest of the consumer, and the Board of Agriculture may, in relation to any matter appearing to that Board to affect the general interests of agriculture in the United

Kingdom, direct an officer of the Board to procure for analysis samples of any article of food, and thereupon the officer shall have all the powers of procuring samples conferred by the Sale of Food and Drugs Acts, and those Acts shall apply as if the officer were an officer authorised to procure samples under the Sale of Food and Drugs Act, 1875, except that:—

(*a*) The officer procuring the sample shall divide the same into four parts, and shall deal with three of such parts in the manner directed by Section 14 of the Sale of Food and Drugs Act, 1875, as amended by this Act, and shall send the fourth part to the Board, and:—

(*b*) The fee for analysis shall be payable to the analyst by the local authority of the place where the sample is procured.

(2) The Board shall communicate the results of the analysis of any such sample to the local authority, and thereupon there shall be the like duty and power on the part of the local authority to cause proceedings to be taken as if the local authority had caused the analysis to be made.

It will be seen that by this section the Local Government Board are only empowered to act in relation to any matter appearing to them to affect the general interest of the consumer. They can only take samples and obtain analyses of them by the analyst employed by the local authority of the place where the sample is procured, just as the local authority itself could do. Beyond that, however, the Board's duty is limited to communicating the result of the analyses to the local authority, and it then becomes the duty of the local authority to cause proceedings to be taken as if they themselves had caused the analysis to be made.

Under Section 3 of the Act of 1899, if the Local Government Board, after communicating with the local authority, are of opinion that the local authority have failed to execute or enforce any of the provisions of the Sale of Food and Drugs Acts in relation to any article of food, and that their failure affects the general interest of the consumer, the Board may, by Order, empower one of their officers to execute and enforce those provisions, or to procure the execution and enforcement thereof in relation to any article of food mentioned in the Order. Under this section it will be seen that the Board can only act when they are satisfied that there has been default on the part of the local authority, and even then their action is limited to putting the Act in force with regard to the specific articles of food which may appear to the Board to require dealing with.

The above two sections of the 1899 Act confer on the two departments concerned powers of taking the specified action in cases in which local authorities are remiss in enforcing the Acts. In general, it may be said that since 1900 the total number of samples taken under the Acts has tended to increase year by year throughout the country. The Local Government Board have not considered it necessary to supersede a local authority in the manner provided for by these sections, and I understand that the same may be said in the case of the Board of Agriculture. It should be mentioned that other sections of the 1899 Act confer special powers on the latter department to make regulations as to the analysis of milk, cream, butter and cheese, and that in consequence of these powers the Board of Agriculture have taken steps by regulations, circulars, and inspections to direct or guide the action of local authorities in regard to certain of these products.

The Local Government Board in 1906 established a sub-division of their medical department for special duty in connection with a variety of questions relating to the purity and adulteration of foods and administration in regard thereto. This sub-division is at present under my charge as acting chief-inspector. A report to the Board on the work done during 1906-8 will shortly be issued. In connection with the Sale of Food and Drugs Acts, the principal work so far done in the sub-department has consisted in local visits occasioned by administrative difficulties in particular districts, in certain general "intelligence" work, and in special inquiries. Public analysts giving evidence to the Commission have emphasised the present state of uncertainty and want of uniformity which obtains in regard to the application of these Acts to a large number of foods, and similar considerations are often pressed on the Board by manufacturers and traders, who either consider that more should be done in the interests of "genuine" articles or who represent that they are prejudiced by unequal action on the part of local authorities. In view of these considerations an endeavour has been made to investigate particular allegations of adulteration or misdescription in a comprehensive manner, by inquiry in each case as to the practices of manufacturers and traders in this country and as to the condition and nature of similar articles imported from abroad. Reports on these subjects have been issued and sent by the Board for the information of local authorities under the Acts. Dr. Hamill's report on adulteration and mis-description of vinegar, which was referred to by Mr. Bramall and other witnesses, was of this series. Another has related to impurities of citric and tartaric acids and cream of tartar. Reports as to rice, baking powders, and certain other subjects are now in preparation.

It may be said from the experience gained from these inquiries that, where questions of misdescriptions (or undesirable confusion of descriptions) of food have been concerned, it has sometimes been obvious that the requirements of the case cannot be fully met by any action which it is open to local authorities to take under the Sale of Food and Drugs Acts. This was pointed out, for example, in the report on the vinegar inquiry, which, however, indicated certain directions in which a partial improvement might result from administration under the Acts on certain recommended lines. The reports referred to are recent, and it is too early to express an opinion as to the influence which they are likely to have on the practice of local authorities and traders. It is right to add that in the investigations referred to we have had practically no difficulty in obtaining assistance from traders concerned, who in many cases have, individually or through associations, made strong representations to the Board with the object of obtaining definitions or standards of purity of their products.

Representations on the Subject of "Mixtures."

The question of the declaration which should be made in the case of a food which consists of a mixture of an article which possesses special characteristics with another which is either merely neutral, or inferior in character (or is an imitation of the characteristic article), has frequently been brought before the Commission, *e.g.*, in regard to descriptions given to spirits which consist of a mixture of Cognac brandy and grain spirit, or certain kinds of "British brandy." Among the questions sometimes brought to the Board's notice in connection with the Sale of Food and Drugs Acts, and referred to above, are several relating to mixtures. I refer below to the additions to the Act of 1875 which have been made by legislation to meet the case of mixtures of butter with similar, but cheaper, fats not obtained from milk. In the case of vinegar, already referred to, the mixtures complained of consist of vinegar obtained by alcoholic and subsequent acetic fermentation of worts made from malt and other cereals—a process which imparts a character to the vinegar and makes it something more than dilute acetic acid—with commercial acetic acid or "wood acid," which can be very cheaply obtained. These mixtures can be sold as "vinegar" or even as "malt vinegar," without any necessary compensation to the consumer in the shape of reduced price. Another case is jam which consists in part of a particular fruit, say raspberry, and in part of apple pulp which may be obtained very cheaply as a waste product of cider making, etc. In this case the public analyst has little difficulty in ascertaining the presence of apple pulp in the raspberry jam, and it is usual for the admixture to be declared on the label. The complaint in regard to this practice, however, is that the declaration, though it may suffice to give the trader the benefit of Section 6 of the Act of 1875 and exempt him from prosecution, is inadequate as a *bonâ fide* statement to the purchaser; words such as "improved by the addition of a suitable proportion of finest other fruit," etc., being worked inconspicuously into the design of the label. Coffee and chicory mixtures, declared as such, or declared as "French coffee," have given rise to similar complaints. These labels sometimes cover mixtures which contain 80 or 90 per cent. of chicory, and here, as in the case of "improved" jams, it is stated that the consumer does not usually or necessarily get the benefit of the cheap-

ness of the inferior article, or realise that an inferior article is being supplied. Local authorities in certain districts (*e.g.*, Bradford, in the case of vinegar; Bethnal Green, in the case of jams; Greenwich, in the case of chicory mixtures) have taken action in some of these cases under Section 6 of the 1875 Act, and in certain instances have obtained convictions; in other districts, prosecutions in similar cases have failed, while often the local authority is deterred by the various considerations involved—especially the possibility of incurring heavy legal expenses—from moving in the matter.

The Acts, however, provide no machinery which the Board could employ authoritatively to settle such questions as the above, or to obtain uniformity of practice among local authorities and their analysts.

OFFICIAL LIMITS, DESCRIPTIONS, OR SPECIAL PROVISIONS UNDER THE SALE OF FOOD AND DRUGS ACTS IN REGARD TO CERTAIN ARTICLES OF FOOD.

In the case of the following foods there are some special points of procedure under the Sale of Food and Drugs Acts, some of which have been referred to by witnesses.

1. Tea.

By Section 30 of the Act of 1875:—

> "All tea imported as merchandise into and landed at any port in Great Britain or Ireland shall be subject to examination by persons to be appointed by the Commissioners of Customs, subject to the approval of the Treasury, for the inspection and analysis thereof, for which purpose samples may, when deemed necessary by such inspectors, be taken and with all convenient speed be examined by the analysts to be so appointed, and if upon such analysis the same shall be found to be mixed with other substances or exhausted tea, the same shall not be delivered unless with the sanction of the said Commissioners, and on such terms and conditions as they shall see fit to direct, either for home consumption or for use as ship's stores or for exportation; but if on such inspection and analysis it shall appear that such tea is, in the opinion of the analyst, unfit for human food, the same shall be forfeited and destroyed, or otherwise disposed of, in such manner as the said Commissioners may direct."

Under this section teas are examined each year on importation, and certain of them are condemned either as unfit for human food or as containing excessive amounts of foreign substances. Reports on this examination are forwarded annually by the Board of Customs to the Local Government Board, which has in several reports drawn attention to the salutary effect of this control. (*Cf.* Annual Report of Local Government Board for 1907-8 (extract in Appendix A, pp. cv. and 258.)

2. Spirits.

The limits of water prescribed by Sec. 6 of the Act of 1879 in connection with the sale of spirits have been referred to above.

3. Milk and Separated Milk.

Under powers conferred by Sec. 4 of the Act of 1899, the Board of Agriculture made regulations, which came into operation on 1st September, 1901.

These regulations provide, as regards *milk*, that where a sample of milk (not being sold as skimmed, separated, or condensed, milk) contains less than 3 per cent. of milk fat, or where the sample contains less than 8·5 per cent. of milk solids other than milk-fat, it shall be presumed, for the purposes of Sec. 6 of the 1875 Act, until the contrary is proved, that the milk is not genuine.

They also provide that where a sample of *skimmed or separated milk* (not being condensed milk) contains less than 9 per cent. of milk solids, it shall be presumed, until the contrary is proved, that the milk is not genuine.

Labelling and Importation.—Sec. 11 of the Act of 1899 provides that every tin or other receptacle containing condensed, separated, or skimmed milk must bear a label clearly visible to the purchaser, on which the words "Machine Skimmed Milk" or "Skimmed Milk," as the case may require, are printed in large and legible type. By Sec. 1 of the same Act, the importation of condensed, separated, or skimmed milk, unless the packages bear a similar label, is made an offence punishable by fine.

4. Butter, Margarine, etc.

The following may be noted among the various provisions of Acts on this subject:—

(*a*) *Definitions.*

Butter.—By the Margarine Act, 1887 (Sec. 3), butter means the substance usually known as butter, made exclusively from milk or cream, or both, with or without salt or other preservative, and with or without the addition of colouring matter.

Margarine was also defined by the Act of 1887. This definition has since been amended by the Butter and Margarine Act, 1907, Section 13 of which provides that the expression "margarine" shall mean any article of food, whether mixed with butter or not, which resembles butter and is not milk-blended butter. The Act of 1899, Sec. 8, restricts the amount of butter fat to be contained in margarine to 10 per cent.

Milk-blended Butter is defined in the Act of 1907 as any mixture produced by mixing or blending butter with milk or cream (other than condensed milk or cream).

The Act of 1907 also prescribes limits of moisture in butter and margarine (16 per cent.) and milk-blended butter (24 per cent.), and gives the Local Government Board power to make regulations prescribing limits for preservatives in these substances.

(*b*) *Special Provisions as to Importation.*

Under Section 1 of the Act of 1899, since extended by the Butter and Margarine Act, 1907, it is made an offence punishable by fine to import butter, margarine, or milk-blended butter unless certain conditions as to labelling, marking of packages, and composition are complied with. Samples are taken for this purpose by the Commissioners of Customs in accordance with directions given by the Treasury after consultation with the Board of Agriculture, and are examined at the Government Laboratory.

(*c*) *Labelling and Marking.*

The Margarine Act, 1887, contains various provisions for the marking of cases, branding of packages, etc., containing margarine. In the case of margarine exposed for sale by retail, the Act provides for marking each parcel so exposed in printed capital letters, and for the delivery of margarine in paper wrappers marked "margarine."

Section 9 of the Butter and Margarine Act, 1907, requires milk-blended butter to be dealt with under such name or names as the Board of Agriculture approve, and under the conditions applicable to the sale or description of margarine, with the substitution of an approved name for the word margarine. There must also be printed on the wrapper in such manner as the Board of Agriculture approve, a description of the article setting out the percentage of water contained therein.

(*d*) *Registration of Premises and Powers of Inspection.*

Various powers as to registration of margarine and butter factories, and as to inspection, examination of books, etc., by officers of the Board of Agriculture or Local Government Board, or in certain cases by officers of local authorities, are conferred by the Acts referred to.

THE PUBLIC HEALTH (REGULATIONS AS TO FOOD) ACT, 1907.

Brief reference may be made to this recent Act, which has conferred powers on the Local Government Board in regard to the making of regulations for the prevention of danger to public health arising from the importation, preparation, storage, or distribution of articles of food and drink (other than drugs or water) intended for sale for human consumption; and has extended and modified for this purpose the powers of making regulations which had been conferred upon the Board by previous Acts in relation to other questions of public health protection. Section 1 (1) of the Act

provides that, without prejudice to the generality of the powers so conferred the regulations may—

"(*a*) provide for the examination and taking of samples of any such articles;

"(*b*) apply, as respects any matters to be dealt with by the regulations, any provision in any Act of Parliament dealing with the like matters, with the necessary modifications and adaptations;

"(*c*) provide for the recovery of any charges authorised to be made by the regulations for the purposes of the regulations or any services performed thereunder."

For the purposes of regulations made under the Act, articles commonly used for the food or drink of man are deemed to be intended for sale for human consumption unless the contrary is proved.

If any person wilfully neglects or refuses to obey or carry out, or obstructs the execution of any regulation made under this Act, he is, under the applied provisions of the Public Health Act, 1896, liable to a penalty not exceeding one hundred pounds, and, in the case of a continuing offence to a further penalty not exceeding fifty pounds for every day during which the offence continues.

No regulations have yet been made by the Board relative to the preparation, storage, or distribution of articles of food manufactured in this country. Two series of regulations have, however, now been issued in regard to imported foods—the Public Health (Foreign Meat) Regulations, 1908, and the Public Health (Unsound Food, First Series) Regulations, 1908. The first of these series has virtually prohibited the importation for sale for human food in this country of certain kinds of objectionable meat foods, *e.g.*, meat which (even though apparently sound) is imported in the form of scraps and cannot be properly examined as to its wholesomeness; meat of pigs which have not been examined by competent authority in the country of origin at the time of slaughter; certain meats treated with specified preservatives. The second series relates to inspection of imported foods generally with a view to appropriate action in instances where the importation of foods which are unsound or unfit for human consumption is suspected. Under these regulations powers of inspection, sampling, etc., are conferred on the medical officers of health of the sanitary authorities of port and riparian districts. With the assent of the Board of Customs, the regulations have prescribed certain duties to be carried out by officers of Customs in aid of the execution of the regulations, *e.g.*, by detention of certain suspected meats for examination by the port sanitary officers. Considerable trade interests have been affected by these regulations, and the Board have given consideration to these (*a*) by causing preliminary inquiries to be made by their inspectors and by publishing reports, (*b*) by issue of the regulations in draft and considering objections and representations, (*c*) by allowing time for necessary trade adjustments to be made.

FOREIGN AND COLONIAL FOOD LAWS.

The following points may be noted under this head:—

International Agreements or Understandings as regards Particular Foods.

In view of references by witnesses to such matters as the American requirements in regard to description of imported whiskey, or the action being taken in France to delimit the Cognac district and regulate the use of the term Cognac, it may be useful to note that in a few directions some experience has been gained of international co-operation or understanding in regard to the purity or description of certain foods.

Dr. Thorpe has in his evidence laid stress on this matter in regard to administration under the Sale of Food and Drugs Act, 1899, in connection with imported butter and margarine, especially in the case of "certified" butter coming from Denmark and Holland (Q. 18094-18104).

Under the Public Health (Foreign Meat) Regulations above referred to, arrangements have been made for recognition of certain labels and marks as attesting that the animal and places of slaughter and preparation have been subjected to a recognised system of inspection in the country of origin. These certificates in the case of whole carcases receive recognition from inspecting officers in determining the extent of examination necessary at the ports of entry; in the case of portions of pig meat less than an entire carcass the presence of the label or mark is necessary if the meat is to be admitted for sale for human consumption in this country. The Local Government Board have accepted the agreed labels and marks after detailed information has been given as to the methods of inspection, etc., which they are to attest, and official assurances have been given that certain requirements which the Board consider essential will be observed. Generally speaking, it may be said that experience so far obtained in this matter has shown that the countries concerned, realising the great importance of the British market, have shown themselves anxious to comply with the requirements of the regulations and to give practical proofs of the working of the system adopted for the purpose.

In the United States, Canada, Holland, and other countries official action has been taken to stop the exportation to England of certain meat foods which were objected to in this country, and this action has facilitated the administration of the Public Health (Foreign Meat) Regulations. It may be noted that in some instances, owing to difference in "standards" or to administrative considerations, the meat foods objected to in this country are not objected to in the country of origin, and *vice versâ*.

Some countries require that evidence should be furnished that imported foods have been subjected to a control or supervision in the country of their origin comparable to that required in the case of home-prepared foods of a similar kind. The Local Government Board were consulted in 1906 by the Foreign Office in regard to a requirement of this kind as it affected British exporters of meat foods to the Argentine Republic. Certain British firms with a considerable business in the export of hams and other special meat foods to Argentine had represented that the enforcement of the new Argentine regulations compelled them to cease exportations. After inquiry a memorandum was prepared setting out the arrangements which the Board would be able to make for ensuring that meat foods exported to the Argentine Republic had been subjected to a system of inspection which could be regarded as the equivalent, under British administrative conditions, of those laid down in the Argentine regulations. The proposal involved the certification by medical officers of health designated by the Board to the effect that supervision is exercised to ensure the observance of certain precautions by the manufacturer. It was approved by the Argentine authorities, and appears to have met the practical requirements of the case; the traders concerned have continued to export under the system arranged. A memorandum providing for similar arrangements has since been issued in regard to export of meat foods from this country to the United States and Philippine Islands.

The above cases have been mentioned as instances where the significance of particular labels or certificates given abroad is known and utilised here for administrative purposes. It will be understood that many other foods are being imported into this country in which the foreign or colonial government concerned, with a view to assisting trade, has attested the "grading" or description of the article. This has been specially developed in the case of Australia and New Zealand food products which are sent to this country; an instance of it in regard to certification of the description of Australian wines and spirits was given to the Commission by Mr. Ferguson.

Foreign and Colonial Legislation in regard to Definitions of Particular Articles of Food.

During the last five or six years there have been important developments in the direction of "pure food" legislation and administration in many foreign countries and in British possessions, of which the United States Pure Food Act, 1906, the French law of 1st August, 1905, and the Pure Food Acts of Victoria and New Zealand are examples. Witnesses before the Commission have made various references to "definitions" established under such legislation for the purpose of obtaining more accurate descriptions of different articles of food and of repressing misdescription and falsification. The definitions in question appear usually to be laid down either as terms which must be applied in connection with the sale of the article (like the term "margarine" in this country)

or as terms which have to bear the defined significance when they are used as trade descriptions. In Appendix B, annexed to this memorandum, I have given some examples of these definitions from documents which have been forwarded to the Local Government Board. I am not in a position to discuss the scope or efficiency of the administrative systems connected with the application of these definitions in practice.

Foreign and Colonial Legislation and Administration in Connection with the Purity and Description of Spirits.

Comparatively little information on this subject is in the possession of the Local Government Board. An abstract of information received by the Board from the Foreign Office in reference to the question of the description of whiskeys in the United States was communicated to the Commission by the secretary last year, and a few notes on the subject are for convenience attached to this memorandum (Appendix C).

Evidence was given to the Commission by Mr. Ferguson with regard to recent legislation on the subject of spirits in Australia.

The French law and administration in regard to spirits derived entirely from wine, spirits described as eau-de-vie, but not derived entirely from wine, and spirits specially designated "Cognac," "Armagnac," etc., was explained to the Commission at some length by Mr. Hennessy in his evidence, and I understand that a request has been made through the Foreign Office that official documents relating to this subject should be supplied to the Commission.

I may add that a comprehensive Bill relating to the description and purity of wines and spirits has lately been under consideration of the German Reichstag, including provisions relative to the description of spirits known as "Cognac," and the differentiation in sale and on wine lists, notices, etc., of Cognac of French origin.

G. S. BUCHANAN.

24 April 1909.

APPENDICES B AND C TO DR. G. S. BUCHANAN'S MEMORANDUM OF 24TH APRIL, 1909.

Appendix B.—"Definitions" of foods in United States, France, and the State of Victoria.

Appendix C.– Notes on administrative action as to Whiskies in the United States.

Appendix B.

"DEFINITIONS" OF FOODS.

A. UNITED STATES.

In the United States the "Standards of Purity for Food Products," which are utilised in connection with the administration of the Federal law relating to the purity and description of foods, have been issued in circulars of the United States Department of Agriculture. These standards were approved and proclaimed as "established standards" on the recommendation of a Commission appointed by the Secretary of Agriculture under authority of an Act of Congress, approved on March 3rd, 1903. The Commission contained representatives of the Association of Official Agricultural Chemists of the United States and of the Inter-State Food Commission, appointed to collaborate with the Secretary "to establish standards of purity for food products and to determine what are regarded as adulterations therein for the guidance of officials of the various states and of the Courts of Justice."

In Circular No. 19 of the Department of Agriculture, June 26th, 1906, a revised series of "established standards" was proclaimed. The principles on which these "standards" are based is stated as follows in the circular:—

Principles on which the Standards are based.

"The general considerations which have guided the committee in preparing the standards for food products are the following:—

"1. The standards are expressed in the form of definitions, with or without accompanying specifications of limit in composition.

"2. The main classes of food articles are defined before the subordinate classes are considered.

"3. The definitions are so framed as to exclude from the articles defined substances not included in the definitions.

"4. The definitions include, where possible, those qualities which make the articles described wholesome for human food.

"5. A term defined in any of the several schedules has the same meaning wherever else it is used in this report.

"6. The names of food products herein defined usually agree with existing American trade or manufacturing usage, but where such usage is not clearly established, or where trade names confuse two or more articles for which specific designations are desirable, preference is given to one of the several trade names applied.

"7. Standards are based upon data representing materials produced under American conditions and manufactured by American processes or representing such varieties of foreign articles as are chiefly imported for American use.

"8. The standards fixed are such that a departure of the articles to which they apply, above the maximum or below the minimum limit prescribed, is evidence that such articles are of inferior or abnormal quality.

"9. The limits fixed as standard are not necessarily the extremes authentically recorded for the article in question, because such extremes are commonly due to abnormal conditions of production and are usually accompanied by marks of inferiority or abnormality readily perceived by the producer or manufacturer."

The "standards" thus proclaimed relate to a large variety of foods in common use. They comprise both animal and vegetable products (including milk and various milk products) and the articles defined are divided into classes and sub-classes.

B. FRANCE.

Definitions of certain articles of food are in effect contained in the various "Règlements d'administration publique pour l'application de la loi du 1er Août, 1905, sur la répression des fraudes dans la vente des marchandises et des falsifications des denrées alimentaires et des produits agricoles," issued from the Ministry of Agriculture (Service de la répression des fraudes).

Regulations have been issued in relation to:—

Wines, sparkling wines, eaux-de-vie, and spirits (3 Sept., 1907).
Fats and comestible oils (11 Mar., 1908).
Vinegars (28 July, 1908).
Beers (28 July, 1908).
Cider and perry (28 July, 1908).
Liqueurs and syrups (28 July, 1908).

Each of these series of regulations begins by reciting Article 11 of the law of August 1, 1905, as follows:—

"Il sera statué par des règlements d'administration publique sur les mesures à prendre pour

assurer l'exécution de la présente loi, notamment en ce qui concerne :

"1° La vente, la mise en vente, l'exposition et la détention des denrées, boissons, substances et produits qui donneront lieu à l'application de la présente loi ;

"2° Les inscriptions et marques indiquant soit la composition, soit l'origine des marchandises, soit les appellations régionales et de crus particuliers que les acheteurs pourront exiger sur les factures, sur les emballages ou sur les produits eux-mêmes, à titre de garantie de la part des vendeurs, ainsi que les indications extérieures ou apparentes nécessaires pour assurer la loyauté de la vente et de la mise en vente."

The effect of each of these regulations is to establish official definitions of articles sold under particular names, in regard to their origin, conditions of preparation, prohibited ingredients or admixtures, and the like.

It should be added that after the law of 1st August, 1905, was enacted, a permanent Commission was established, comprising some 30 members, who include official and technical experts, and also medical members, with duties of prescribing methods of analysis necessary to establish the composition and content as regards useful constituents of different articles of food, and to detect fraud. It may be presumed that the definitions above referred to have been established in relation to recommendations made by this Commission.

C. STATE OF VICTORIA.

The following are extracted from the general report of the Board of Public Health, Victoria, to the Minister of Health, for the years 1905, 1906 and 1907 ;—

XXII.—The Pure Food Act, 1905.

(*Extracts from the Report of the Board of Health.*)

"The Pure Food Act, which was passed in December, 1905, amends several sections of the Health Act, 1890, and the Wine Adulteration Act, 1900, and contains a number of novel provisions. It provides, *inter alia*, for the establishment of a specially qualified Food Standards Committee charged with the functions of formulating standards of purity, quality, and composition for articles of food and drugs. Adulteration and false description are specifically defined, and progressive penalties are provided for offences, with additional public advertisement for second or subsequent offences. The Act further requires explicit labelling of packages, and one of the most important sections provides for the punishment, where possible, of the actual adulterator. The retail vendor will not be penalised if it is clear that he has no guilty knowledge, and that he has taken reasonable precautions against committing an offence. The Act places the obligation on every council of obtaining for analysis at least three samples of articles of food for every 1,000 of the population of its district. Power is conferred on the Board under Section 41 to make regulations on a number of specified subjects, on their own initiative, in certain cases, and on the recommendation of the Food Standards Committee in others.

* * * * *

"The first regulations under the Act were made on the 11th May, 1906, and related to the labelling of packages of food containing preservatives and colouring matter. By these regulations a statement of the nature and proportion of any preservative substance and of the nature of any colouring matter present in any article of food was required on the wrapper or receptacle containing the article. The form of declaration to be used was also prescribed.

* * * * *

"The use of the word 'pure' was, by regulation made on the 6th July, 1906, prohibited in any label on or attached to any article of food which is not true to name, or is not of standard quality, or with which any foreign substance has been mixed.

* * * * *

"Besides the regulations above referred to, regulations embodying recommendations of the Food Standards Committee were also made from time to time during the years 1906 and 1907. These regulations are referred to in detail in the report of the Food Standards Committee hereto appended, and include standards relating to over 100 of the principal articles of food, and to drugs; exemptions from certain provisions of Section 15 of the Act, and methods of analysis for certain foods. These regulations were issued on various dates between September, 1906, and February, 1907.

"The year 1906 may be regarded as a transitional period, in which a remarkable change took place in the character of the food substances supplied to the public in this State. Manufacturers and importers for the most part loyally accepted the new laws and took immediate steps towards observing the main provisions of the Act, especially those of Section 24 defining adulteration and false description. It is definitely known that immense quantities of stock were withdrawn from sale and that large orders for importation were cancelled or modified.

"In spite of the warnings of the Board in regard to the necessity for correcting the defective labelling of packages, there still remained on 1st July, 1906, a large quantity of old stock in the various warehouses and stores throughout the State not labelled in compliance with the provisions of Section 15 (*i.e.*, with the name and address of the maker or vendor, etc., the weight of contents of package, and the trade description). Representations having been made by a large deputation from the principal commercial bodies and associations of the State as to the difficulty of tracing the whereabouts of packages of foods of which they had lost sight, and which were defective only in regard to labelling, we deemed it advisable to issue a circular to municipal councils suggesting, in regard to packages of food which were in compliance with the standard and concerning which no attempt had been made to deceive the public or to evade the spirit of the Act or regulations, that the provisions of the Act and the regulations relating to labelling other than those conditioning the use of colouring matter or preservative substances be not stringently enforced until 1st July, 1907.

"While thus suggesting the withholding of action in regard to less important provisions of the law relating to old stocks of food—a course which had been foreseen by the legislature when the Act was in passage—councils were urged to spare no efforts in bringing to justice the persons who had disregarded the more important provisions of the Act, especially those relating to adulteration, false description, unwholesomeness, the use of prohibited preservative and colouring substances, etc.

* * * * *

"A full set of the regulations made under the Act up to the end of 1907 is attached to this report as Appendix I. It may be added that copies of all regulations under the Pure Food Act were forwarded to municipal councils immediately after their gazettal, and that it is proposed during 1908, after certain recommendations which the Food Standards Committee have intimated they desire to make have been dealt with, to issue the regulations, in pamphlet form, with notes for the information of councils and their officers and of the public."

Extract from Report of Food Standards Committee.

The report of the Food Standards Committee to the Minister of Health for the years 1906 and 1907 is included in the same volume.

The last paragraph of this report contains a summary as follows :—

"Up to the end of 1907 the committee had made recommendations to the Board :

"(1.) Prescribing standards for over 100 of the principal articles of food.

"(2.) Prescribing the proportion and specifying the foods in which certain foreign substances might be used for preservative purposes, and prohibiting their use in all other foods.

"(3.) Specifying foods in which colouring may not be used, and prescribing a standard for all 'allowed' colouring substances.

"(4.) Standardising all drugs, with special reference to those containing over a certain proportion of alcohol or containing certain patent drugs.

"(5.) Embodying classes and lists of articles of food to be exempted from certain or all of the provisions of Section 15 of the Pure Food Act.

"(6.) Prescribing methods of analysis for certain articles of foods.

"(7.) Relating to the inspection and approval of filters and sterilisers.

"(8.) Amending standards in five cases.

"It is proposed during 1908 to prescribe a number of additional standards, to review the standards fixed in regard to milk, concentrated or condensed milk, and vinegar, and to consider the question of prescribing methods of analysis for articles of food in addition to those already dealt with."

Section 15 of the Pure Food Act, referred to in (5) of the above summary, is as follows:—

Exemptions under Section 15, Pure Food Act.

Section 15 of the Pure Food Act provides that:—

(1.) Unless exempted by the Board on the recommendation of the Food Standards Committee, every package of any article of food shall be labelled with information as to the name and address of the vendor or maker thereof, or agent therefor, or owner of rights of manufacture, the weight or number or measure or volume of the contents, and the trade description.

(2.) Approximate weight or measure may be allowed by the Board in the case of such articles of food as may be recommended by the Food Standards Committee.

Appendix C.

NOTES ON ADMINISTRATIVE ACTION AS TO "WHISKIES" IN THE UNITED STATES.

These Notes have been prepared from documents which the Local Government Board have received from the Foreign Office, some of which have already been summarised for the Commission in the Memorandum supplied last year by Mr. Symonds for the information of the Commission.

The United States Act entitled, "An Act for preventing the manufacture, sale, or transportation of adulterated or misbranded or poisonous or deleterious foods, drugs, medicines and liquors, and for regulating traffic therein, and for other purposes," generally known as "The Pure Food Law," was approved June 30th, 1906, and came into force on 1st January, 1907.

The Act is applicable to articles of food imported from abroad and to articles manufactured in America which are the subject of inter-State commerce. Articles used for purely local consumption in the State in which they are produced are not affected by the Act. In the case of spirits distilled in the United States, however, it may be presumed that the majority of distilleries have business in more than one State.

By the terms of this Act it appears that certain spirits may be excluded from admission into the United States and be not admitted to inter-State traffic. Such spirits fall into three categories.

(1) Adulterated Spirits.

The Act defines adulteration, so far as whiskey and spirits are concerned, thus:—

"In the case of foods:—

"*First.*—If any substance has been mixed or packed with it so as to reduce or lower or injuriously affect its quality or strength."

(N.B.—This prohibition includes substances properly used in the preparation of food products for clarification or refining, and eliminated in the further process of manufacture (Regulation 11). But it does not necessarily include whiskeys blended or compounded with harmless grain or silent spirits not injurious to health, provided that the product is not misbranded.)

"*Second.*—If any substance has been substituted wholly or in part for the article.

"*Third.*—If any valuable constituent of the article has been wholly or in part abstracted."

"*Fourth.*—If it be mixed, coloured, powdered, coated, or stained in a manner whereby damage or inferiority is concealed."

(But harmless colouring may be used, provided that the article is not misbranded.)

"*Fifth.*—If it contain any added poisonous or other added deleterious ingredient which may render such article injurious to health."

(Beading oil and wood oil (or methylated spirits) are both considered to be injurious to health, and whiskey containing them will not be admitted to importation into the United States.)

(2) Misbranded Spirits.

A "misbranded" article is defined by Section 8 of the Act:—

"*First.*—If it be an imitation of or offered for sale under the distinctive name of another article."

"*Second.*—If it be labelled or misbranded so as to deceive or mislead the purchaser . . . . or if the contents of the package as originally put up shall have been removed in whole or in part, and other contents shall have been placed in such package, or if it fail to bear a statement on the label of the quantity or proportion of any morphine, opium, cocaine, heroin, alpha or beta eucaine, chloroform, cannabis indica, chloral hydrate, or acetanilide, or any derivative or preparation of any such substances contained therein."

"*Fourth.*—If the package containing it or its label shall bear any statement, design, or device regarding the ingredients or substances contained therein, which statement, design, or device shall be false or misleading in any particular."

In regard to the second of these conditions, there is a further proviso in Section 8, under which spirits not containing any poisonous or deleterious ingredients would not be deemed to be misbranded or adulterated

"in the case of articles labelled, branded, or tagged so as to plainly indicate that they are compounds, imitations, or blends, and the word 'compound,' 'imitation,' or 'blend,' as the case may be, is plainly stated on the package in which it is offered for sale, provided that the term 'blend' as used herein shall be construed to mean a mixture of like substances, not excluding harmless colouring or flavouring ingredients used for the purpose of colouring or flavouring only."

Details as to labelling, etc., required under this Act have been given in Regulations issued on October 17, 1906, by the authority of the Secretaries of the Treasury, Agriculture, and Commerce and Labour. The substance of these regulations is that the wording of the label must be literally true. The label must contain the name of the substance or product; where articles of food have been mixed, compounded, or blended, the fact must be stated; the substances and ingredients used in such compounding, etc., must be stated, but the proportions of each ingredient are not required to be inserted except in the case of certain specified drugs. The name of the manufacturer or producer, or of the place where manufactured, need not be stated except in the case of mixtures or compounds having a distinctive name, but if given, the name must be true.

(3.) Spirits Forbidden to be Sold or Restricted in Sale in the Country of their Origin.

Section 2 of the Act contains the following:—

". . . . If it appears that any article . . . . is of a kind forbidden entry into, or forbidden to be sold, or restricted in sale in the country in which it is made or from which it is exported, or is otherwise falsely labelled in any respect, the said article shall be refused admission."

Construction of Section 8 of the Act as to the Mixing, Blending and Labelling of Whiskies.

Certain questions having arisen in the construction of Section 8 of this Act as to the blending, mixing, and labelling of whiskies, the matter was referred to the United States Attorney-General for his opinion.

The Attorney-General gave his opinion 10th April, 1907, and in endorsing this opinion and directing action to be taken upon it the President of the United States summarised the effect of the decision as follows:—

Decision as to Labelling of Whiskies.

"Straight whiskey will be labelled as such.

"A mixture of two or more straight whiskies will be labelled 'blended whiskey' or 'whiskeys.'

"A mixture of straight whiskey and ethyl alcohol, provided that there is a sufficient amount of straight whiskey to make it genuinely a 'mixture,' will be labelled as compound of, or compounded with, pure grain distillate.

"Imitation whiskey will be labelled as such."

Extracts from the Attorney-General's Opinion.

The following extracts from the Attorney-General's opinion deserve attention:—

"The primary purpose of the pure food law is to protect against fraud consumers of food or drugs; as an incidental or secondary purpose, it seeks to prevent, or at least discourage, the use of deleterious substances for either purpose; but its first aim is to insure, so far as possible, that the purchaser of an article of food or of a drug shall obtain nothing different from what he wishes and intends to buy. According to the recognised canons of statutory construction, the language of its provisions must be interpreted with reference to and in harmony with this primary general purpose, so that, in determining the proper nomenclature for articles of food as defined in the Act, the intention of the law will be best observed by giving to such articles names readily understood and conveying definite and familiar ideas to the general public, although such names may be inaccurate in the view of a chemist or physicist or an expert in some particular industrial art, as in the distillation and refining of spirits. Moreover, the same name may be given by dealers or by the general public to two or more substances varying very materially in their scientific characteristics, and this fact must be given due weight in passing upon questions of branding or labelling under the law.

"Human experience has associated certain impressions on the senses of taste and smell with the consumption of certain articles of food, and the so-called 'flavour' which expresses the resultant of these impressions constitutes a factor of decisive weight in determining the similarity or identity of substances of this character to the mind of the ordinary member of the community, quite irrespective of the relative importance of these chemical or physical properties in the substances which impart this flavour as compared to their other chemical or physical properties. This fact is aptly illustrated by a question considered at much length in the papers referred and also submitted to me as above, namely:—'What is whiskey?' A chemist or a distiller might answer this question altogether differently from the ordinary purchaser of whiskey for his own consumption; but the purchaser's view of the matter is material to attain the primary purpose of the pure food law; and I think it may be safely said that what he means by 'whiskey' when buying it is a distilled spirit, fit for use as a beverage and having the particular flavour which human experience has classified as that of 'whiskey.' Undoubtedly the flavours of different kinds of spirits all known as 'whiskey' differ considerably, and it may be that the general impression of their similarity is due, in some measure, to imagination or imperfect memory; nevertheless, a distinct and definite idea is suggested to the mind by the words 'whiskey flavour'; this idea is an essential factor in ascertaining the identity of a spirit claimed to be whiskey, and, in my opinion, it is the decisive factor in determining the relative weight of the claims of two or more kinds of spirit to the name."

* * * *

"I learn from the papers referred to me that the Department of Agriculture has reached the conclusion that whiskey, like brandy and rum and unlike gin, is a natural spirit, its peculiar taste and aroma being imparted to it in the course of distillation and arising primarily from essential oils existing in the substances from which it may be distilled; that is to say, it corresponds to a wine like sherry and not to a wine like champagne. This conclusion seems to be fully warranted by information contained in the papers before me and by such other information as I have been able to obtain; nevertheless, as hereinafter set forth, the statement may, perhaps, need some qualification, or, rather, some explanation It is doubtful, however, whether the definition of 'whiskey' contained in the papers aforesaid, and which I understand to have received the approval of the Department of Agriculture, is quite broad enough to meet the general intent of the law of 1906. This definition I understand to be as follows:—

"'Whiskey is a distillate, at the required alcoholic strength, from the fermented mash of malted cereals, or from malt with unmalted cereals, and contains the congeneric substances formed with ethyl alcohol which are volatile at the ordinary temperatures of distillation, and which give the character to the distillate.'

"It being admitted that whiskey is a natural spirit having certain 'congeneric substances,' which, in the language of the above definition 'give the character to the distillate,' it seems obvious that a mixture of two or more different whiskies as thus defined, whether their differences arise from the character of the substances from which they were distilled or from the method of distillation used in each case respectively, or even from their several ages and the environment in which they were kept subsequently to distillation, would be appropriately termed a 'blend of whiskies,' or 'blended whiskey,' or 'blended whiskies'; any one of these three terms would be appropriate, provided that each article entering into the combination, standing alone, would be appropriately designated as 'whiskey.'

"The mixture of a spirit properly designated as 'whiskey' with another spirit which, standing alone, would not be properly designated as 'whiskey,' such as ethyl alcohol, must, in my opinion, be labelled or branded as a 'compound,' or as 'compounded.'"

* * * *

"I conclude, therefore, that according to the true intent of the pure food law, a mixture of whiskey with neutral spirit must be deemed a 'compound' and not a 'blend,' although the spirit may be a distillate from the same substance used to furnish the whiskey, and that such a mixture stands on the same footing as a mixture of whiskey and brandy or of whiskey and rum.

"The definition of 'whiskey' as a natural spirit involves as its corollary that there *can* be such a thing as 'imitation whiskey.' If the same process were followed of which we spoke in connection with artificial wine, namely, if ethyl alcohol, either pure or mixed with distilled water, were given by the addition of harmless colouring and flavouring substances the appearance and flavour of whiskey, it is impossible to find any other name for the product, in conformity with the pure food law, than 'imitation whiskey.'

"An interesting question remains, the question, in my opinion, of greatest difficulty connected with the subject, namely, whether a mixture of a liquid such as has just been described, or, indeed, a mixture of ethyl alcohol itself with whiskey ought to be labelled 'whiskey' at all."

* * * *

"I conclude that a combination of whiskey with ethyl alcohol, supposing, of course, that there is enough whiskey in it to make it a *real* compound and not the mere semblance of one, may be fairly called 'whiskey,' provided the name is accompanied by the word 'compound' or 'compounded,' and provided a statement of the presence of another spirit is included in substance in the title."

Action taken in view of the above Decision as to Labelling of Whiskies.

Since the above opinion was given various steps appear to have been taken in the United States to secure that spirits hitherto known generally as "whiskies" in that country should be described in accordance with that opinion. The latter was published by the Department of Agriculture in 1907 as "Food Inspection Decision No. 65," covered by the following statement:—

"The Labelling of Whiskey, Blends, Compounds, and Imitations thereof.

"The labelling of whiskey, blends, compounds, and imitations thereof, under the Food and Drugs Act of June 30, 1906, will be governed by the opinion of the Attorney-General, dated April 10, 1907, bearing the approval of the President, published herewith.

"JAMES WILSON,
"Secretary of Agriculture.
"Washington, D.C., April 11, 1907."

Questions having subsequently arisen as to the significance of the term "compound," the further opinion of the Attorney-General was obtained, and was issued by the Secretary of Agriculture in December, 1908, as "Food Inspection Decision, 98." The Attorney-General there stated that in the present position of his knowledge on the subject he was of opinion that the department should not advise a prosecution on the ground of a violation of the law for using labels such as "compound" or "compounded whiskey" to describe a mixture of whiskey with ethyl alcohol if the amount of whiskey in the mixture equals or exceeds one-third in volume of the spirituous content; that is to say, one-third of the whiskey and neutral spirits combined.

Board of Internal Revenue Circular.

Steps appear also to have been taken by the Board of Internal Revenue in the United States to require distillers and traders dealing with whiskey in bonded stores, or otherwise in bulk (parcels not less than 5 gallons), so to mark vessels, casks, etc., as to differentiate spirits in accordance with the decisions under the Pure Food Law. A departmental circular (No. 33) from the office of the Commissioner of Internal Revenue, of May 5th, 1908, requires distilled spirits, when drawn from the receiving cisterns in the distillery, to be classified into three classes, "high wines," "alcohol" and "spirits, as the case may be," and to be marked and branded accordingly. The term "*alcohol*" is to cover all forms of distilled spirits from which the substances congeneric with ethyl alcohol have been removed for practical purposes altogether, and which have hitherto been marked as "pure, neutral or cologne spirits."

"*Spirits, as the case may be,*" are to include those products of distillation in which, by reason of the original material used and the methods of distillation employed, those characteristic substances congeneric with alcohol have been retained, which differentiate them into various forms of potable spirits—such as "whiskey," "brandy," "rum," and "gin." The particular names of such potable spirits (*i.e.*, whiskey, brandy, etc.), without other description, and without the addition of any adjective or descriptive word whatsoever, is to be marked on the vessels in question and on casks which contain these spirits diluted to potable proof.

The circular also provides, under the heading "Marking of Rectifiers Packages," that packages of distilled spirits stamped by gaugers after rectification at a rectifying house shall be specially marked:—

(1.) As *whiskey, rum*, etc. In this case the spirits must not be "blended" or "compounded," but may be "so treated as to partially transform or partially eliminate the original congeneric substances and bring them into the condition of a particular form of potable spirits."

(2.) As whiskey, etc., "*blended,*" if they are mixtures of potable spirits of the same kind.

(3.) As "*compound*" if they are mixtures of potable spirits, other than alcohol, with alcohol, provided there is enough of the potable spirit to make the mixture a real compound and not the mere semblance of one. The term "whiskey, compounded with grain distillate," would be allowed in such case.

(4.) As "*imitation.*" Alcohol to which artificial flavours, colours, or extracts have been added so as to make the spirit resemble some particular kind of potable spirit is to be marked with the name of such spirit preceded by the word "imitation"; for example, "imitation whiskey."

(5.) Cordials, liqueurs and other like artificial compounds to be marked with "such appropriate name as shall indicate the kind of the contents.

Cases in the Courts: Appointment of a Commission.

Some of the obligations imposed upon various sections of the spirit trade in America, in consequence of the Pure Food Act, 1906, and decisions such as those above quoted, appear to have raised considerable opposition on the part of important sections of the trade. Various points have been contested in the Courts, or are still under the consideration of the Courts, in the United States, the parties in the dispute on the trade side being the "rectifiers" on the one hand and the manufacturers of "straight" whiskey on the other.

A Commission has lately been appointed, consisting of a representative of the Bureau of Internal Revenue, the Secretary of the Department of Agriculture, and a representative of the Bureau of Chemistry, to report on certain of these questions, particularly: (1) Whether coloured neutral spirits now classed as "imitation" whiskey must be so marked or whether some other form of marking is permissible, and (2) whether the decision based on the opinion of the Attorney-General that in the case of a "compounded" whiskey at least one-third of the mixture must be whiskey is to be maintained. This Commission does not appear yet to have reported, and seemingly certain cases introduced into the Courts have been suspended pending the result of the Commission's enquiry.

BRITISH WHISKIES IMPORTED INTO THE UNITED STATES.

The provisions of the Pure Food Act of 1906, as said above, are applicable to imported spirits, and difficulties appear to have been met by British exporters in consequence of these requirements. Dr. Wiley, the chief of the Bureau of Chemistry of the United States Department of Agriculture, visited distilleries in Scotland and Ireland in 1905, and from a pamphlet subsequently issued from his department (Bulletin 102) it appears that he arrived at the conclusion that grain whiskey, or patent still whiskey, as made in Scotland and Ireland, have not the characteristics of Scotch and Irish whiskey. Action taken in America with regard to British whiskies, subsequent to the Pure Food Act, 1906, seems to have been based on the view that the patent still whisky or grain spirit produced in the United Kingdom corresponds to "alcohol" in the American definition above given, and should in fact be treated as practically nothing but ethyl alcohol.

On certain occasions during 1907 and 1908 steps were taken or threatened by the authorities concerned to refuse admission into the United States of Scotch and Irish whiskies, the labels of which did not conform with the American requirements. Representations were made to the United States Government by the British Embassy on behalf of the importers affected.

It is understood that at the present time admission is not being refused in the case of Scotch and Irish whiskies on the grounds of mislabelling of the kind referred to, although the question of mislabelling these whiskies may be made a subject of action when they reach the American market, just as in the case of the American products. Steps appear to have been taken by certain British firms, pending settlement of the question, to label their whiskies in a manner which is approved by the American authorities.

Difficulty has also arisen in connection with the declaration of the presence of colouring matter. This point was referred to by Dr. Schidrowitz in his recent evidence to the Commission on brandy. The British firms concerned strongly object to the declaration of the presence of caramel, which is used in small quantities for the purpose of standardising the colour, and is harmless. In the case of whiskies made in America the addition of caramel seems to have an importance from the administrative point of view which it does not possess in this country, caramel colouring being one of the chief indications of spirits at present classed as "compound" or "imitation" whiskey. In America the colour of so-called "straight" whiskies appear to be mainly derived from the use of charred casks and not by the use of caramel.

It should be added that in 1907 questions were raised by the authorities under the United States Pure Food Act regarding the admissibility to the United States of whiskey which was "of a kind forbidden to be sold or restricted in sale in the country in which it is made." (See the reference above to Section 2 of the Pure Food Act, 1906.) Spirits which could be shown to be of a kind so forbidden may be excluded from

admission to the United States under the Act. The objection taken by the United States authorities was to certain proceedings which are permitted by the British Excise in the case of spirits for export, but are not allowed in the case of spirits for home consumption. It was pointed out by the British Government that the distinction is made wholly for revenue convenience, and that in the case of spirits bonded for home consumption the restrictions in question have not been made with the intention either of seeing that the home consumer gets his spirit properly described or that he gets it pure. The decision in the Islington case was also referred to by the United States authorities as evidence that there is a kind of spirit (spurious whiskey) which is not allowed to be called Scotch or Irish whiskey in Great Britain and is thus "restricted in sale" here. In reply to this it has been represented that the Islington decision is isolated and local in its application and does not constitute a legal definition of what whiskey is. In this connection the United States Government was informed of the appointment of the Royal Commission and the nature of its reference, which, as was pointed out, covered enquiry as to spirits prepared in this country for export.

April, 1909. G. S. B.

APPENDIX V.

Documents transmitted to the Royal Commission by the Foreign Office.

I.

FRENCH PRESIDENTIAL DECREE RESTRICTING THE APPLICATION OF THE TERMS "COGNAC," "EAU-DE-VIE DE COGNAC," AND "EAU-DE-VIE DES CHARENTES" TO SPIRITS PRODUCED FROM WINE GROWN AND DISTILLED IN CERTAIN DEFINED DISTRICTS.

Décret du 1er Mai, 1909,

portant règlement d'administration publique pour la délimitation de la région ayant, pour ses eaux-de-vie, un droit exclusif à la dénomination de "Cognac."

Le Président de la République Française,

Sur le rapport des Ministres de l'Agriculture et du Commerce et de l'Industrie,

Vu la loi du 1er août 1905 sur la répression des fraudes dans la vente des marchandises et des falsifications des denrées alimentaires et des produits agricoles, modifiée par la loi du 5 août 1908, et notamment l'article 11 ainsi conçu :

"Il sera statué par des règlements d'administration publique sur les mesures à prendre pour assurer l'exécution de la présente loi, notamment en ce qui concerne :

"1° La vente, la mise en vente, l'exposition et la détention des denrées, boissons, substances et produits qui donneront lieu à l'application de la présente loi ;

"2° Les inscriptions et marques indiquant, soit la composition, soit l'origine des marchandises, soit les appellations régionales et de crus particuliers que les acheteurs pourront exiger sur les factures, sur les emballages ou sur les produits eux-mêmes, à titre de garantie de la part des vendeurs, ainsi que les indications extérieures ou apparentes, nécessaires pour assurer la loyauté de la vente et de la mise en vente ; la définition et la dénomination des boissons, denrées et produits, conformément aux usages commerciaux ; les traitements licites dont ils pourront être l'objet en vue de leur bonne fabrication ou de leur conservation ; les caractères qui les rendent impropres à la consommation ; la délimitation des régions pouvant prétendre exclusivement aux appellations de provenance des produits. Cette délimitation sera faite en prenant pour base les usages locaux constants" ;

Vu le décret du 3 septembre 1907, réglementant l'application de la loi du 1er août 1905, en ce qui concerne les vins, les vins mousseux, les eaux-de-vie et spiritueux, et notamment l'article 10 ainsi conçu :

"En vue d'assurer la protection des appellations régionales et de crus particuliers réservées aux vins, vins mousseux, eaux-de-vie et spiritueux qui ont, par leur origine, un droit exclusif à ces appellations, il sera statué ultérieurement, par des règlements d'administration publique, sur la délimitation des régions pouvant prétendre exclusivement aux appellations de provenance des produits" ;

Vu l'avis des Ministres de la Justice et des Finances ;

Le Conseil d'Etat entendu,

Décrète :

ARTICLE PREMIER.

Les appellations régionales "Cognac," "Eau-de-vie de Cognac," "Eau-de-vie des Charentes" sont exclusivement réservées aux eaux-de-vie provenant uniquement des vins récoltés et distillés sur les territoires ci-après délimités :

Département de la Charente-Inférieure.

Arrondissement de Rochefort : toutes les communes.
Arrondissement de Marennes : toutes les communes.
Arrondissement de Saintes : toutes les communes.
Arrondissement de Saint-Jean-d'Angély : toutes les communes.
Arrondissement de Jonzac : toutes les communes.
Arrondissement de La Rochelle :
- Canton d'Ars : toutes les communes.
- Canton de la Jarrie : toutes les communes.
- Canton de la Rochelle-Est : toutes les communes.
- Canton de la Rochelle-Ouest : toutes les communes.
- Canton de Saint-Martin : toutes les communes.
- Canton de Courçon : les communes d'Angliers, Benon, Courçon, Cramchabân, Ferrières, le Gué-d'Alleré, la Laigne, Nuaillé, Saint-Cyr-du-Doret, Saint-Jean-de-Liversay, Saint-Martin-de-Villeneuve, Saint-Sauveur-de-Nuaillé.
- Canton de Marrans : les communes de Longèves, Saint-Ouen, Villedoux.

Département de la Charente.

Arrondissement de Cognac : toutes les communes.
Arrondissement de Barbezieux : toutes les communes.
Arrondissement d'Angoulême :
- Canton d'Angoulême (1er canton) : toutes les communes.
- Canton d'Angoulême (2e canton) : toutes les communes.
- Canton de Blanzac : toutes les communes.
- Canton de Hiersac : toutes les communes.
- Canton de Rouillac : toutes les communes.
- Canton de Saint-Amant-de-Boixe : toutes les communes.
- Canton de Villebois-la-Valette : toutes les communes.
- Canton de la Rochefoucauld : les communes d'Agris, Brie, Bunzac, Chazelles, Coulgens, Jauldes, Pranzac, Rancogne, Rivières, la Rochette, Saint-Projet-Saint-Constant.
- Canton de Montbron : les communes de Charras, Feuillade, Grassac, Mainzac, Marthon, Saint-Germain, Souffignac.

Arrondissement de Ruffec :
- Canton d'Aigre : toutes les communes.
- Canton de Ruffec : les communes de Villegats et de Verteuil.
- Canton de Mansle : les communes d'Aunac, Bayers, Celettes, Chenon, Fontclaireau, Fontenille, Juillé, Lichères, Lonnes, Mansles, Mouton, Moutonneau, Puyréaux, Saint-Amand-

de-Bonnieure, Saint-Angeau, Saint-Ciers, Sainte-Colombe, Saint-Front, Saint-Groux, Valence, Villongnon.

Canton de Villefagnan: les communes de Brettes, Courcôme, Longré, Raix, Souvigné, Tuzie, Villefagnan.

Département de la Dordogne.

Arrondissement de Ribérac:

Canton de Saint-Aulaye: les communes de Chenaud, Parcoul, Puymangou, la Roche-Chalais, Saint-Aulaye, Saint-Michel-de-Rivière.

Département des Deux-Sèvres.

Arrondissement de Niort:

Canton de Mauzé: les communes du Bourdet, Prin-Deyrançon, Petit - Breuil - Deyrançon, Mauzé-sur-le-Mignon, Priaires, la Rochénard, Usseau.

Canton de Beauvoir-sur-Niort: les communes de Beauvoir-sur-Niort, Belleville, la Charrière, le Cormenier, la Foye-Montjault, Granzay, Gript, Prissé, la Revêtizon, Saint-Etienne-la-Cigogne, Saint-Martin-d'Augé, Thorigny.

Arrondissement de Melle:

Canton de Brioux-sur-Boutonne: la commune du Vert.

ART. 2.

Les Ministres de l'Agriculture, du Commerce et de l'Industrie, de la Justice et des Cultes et des Finances, sont chargés, chacun en ce qui le concerne, de l'exécution du présent décret qui sera publié au *Journal officiel* de la République française et inséré au *Bulletin des lois*.

Fait à Paris, le 1er mai 1909.

Signé: A. FALLIÈRES.

Par le Président de la République:

Le Ministre de l'Agriculture, Signé: J. RUAU.

Le Ministre du Commerce et de l'Industrie, Signé: JEAN CRUPPI.

Le Garde des Sceaux, Ministre de la Justice et des Cultes. Signé: A. BRIAND.

Le Ministre des Finances, Signé: J. CAILLAUX.

II.

REGULATIONS RESPECTING THE MANUFACTURE AND SALE OF ALCOHOL IN FRANCE.

(a) MEMORANDUM SPECIFYING THE NATURE OF THE INFORMATION DESIRED BY THE ROYAL COMMISSION:—

1. The Commission are desirous of obtaining information as to the system of official control exercised in France with the object of preventing the misdescription of potable spirits. They would be glad to be furnished with copies of the laws relating to the matter, together with copies of any official regulations, circulars, etc., in connection therewith which have been issued at the instance of the Service de la Répression des Fraudes, or of the Excise Service, or in other ways.

2. They would also be glad of any information which can be furnished in regard to the following questions:—

What varieties of spirits may, consistently with the due observance of the French laws and regulations, at present be exported to the United Kingdom under description or label as "Cognac" and "Brandy" respectively? May the latter term include mixtures of *eau-de-vie* derived from wine with spirit derived from grain or beet?

3. What steps have been taken, or are proposed, to delimit the Cognac area; and what measures in addition to the delimitation have been taken or are proposed for the purpose of adequately distinguishing spirits which have been distilled in that area from wines there produced?

4. Can any figures be given which indicate for recent years in France:—

The total production of spirits, potable and industrial respectively;

The total production of *eau-de-vie* derived from wine;

The total production of *eau de vie de vin* in the Cognac district?

(b) TRANSLATION OF REPLIES RECEIVED FROM THE FRENCH MINISTER FOR FOREIGN AFFAIRS TO THE QUERIES SUBMITTED BY THE ROYAL COMMISSION:—

Answer to Query 1.—The Law of March 31st, 1903, (Art. 23) provides for the delivery of transport bills (titres de mouvement) on the carriage of all alcohols; those printed on pink paper are utilised for the transport of all spirits whatever may be their origin; the others, printed on white paper, are only employed, with the exception of rums and gins, for the transport of natural spirits and alcohols produced exclusively from the distillation of wine, cider, perry, residue of pressed grapes (marcs), cherries and prunes.

The transport bills printed on white paper indicate the substance from which the spirits have been derived, and a special ticket is provided which is detached and kept by the consignee. In the case of spirits exported, the transport bill is retained by the Customs at the port of exportation or the place where they leave French territory, but the ticket is detached and given to the exporter or his representative in order that he may transmit it to the consignee of the spirits. This ticket, to which the Law grants the quality of a "Certificate of Origin," constitutes an official guarantee of the alcohols and spirits to which it relates.

The delivery of these white transport bills is reserved by paragraph 4 of Article 23 of the Law of the 31st March, 1903, to the following:—

First, to the manufacturers ("bouilleurs") and distillers who work exclusively under the control of the Administration, and who receive from outside no other kind of spirits whatever.

Second, to the merchants who, having received spirits and natural alcohols for which they have an official receipt ("acquits") store them in a separate building, and make a request that they shall be the object of a separate account for the quantity and volume of pure alcohol which they contain.

In order to give these spirits accompanied by white transport bills a further guarantee, the dispositions of the Law of 1903 have been reinforced, on the one hand by Article 6 of the Law of August 6th, 1905, which, in the case of spirits and alcohols derived from wine, subordinates the delivery of these white receipts ("acquits blancs") to the proof that the wines have undergone no sweetening operations whatever in the first pressing; on the other hand, Article 3 of the Law of July 15th, 1907, provides that, as from the 1st January, 1908, the natural products for which a white receipt is claimed shall be stored in buildings separated by a public road from all other buildings which contain spirits for which a pink transport bill is required.

The present legislation, therefore, provides that in order to qualify for the white receipt, equivalent to a certificate of origin, the spirits and alcohols must be produced immediately under the effective control of the Administration of Indirect Taxation until they leave the premises of the distiller, and must be made from stated raw products (wine, cider, perry, pressed grapes, cherries or prunes).

It is provided also by the last paragraph of Article 23 of the Law of March 31st, 1903, that these spirits and alcohols must not, while in the stores of the distillers or merchants, be subjected to any admixture with other spirits or addition of any substance modifying their composition or their taste.

Article 23 of the Law of the 31st March, 1903, respecting the delivery of white receipts is only applicable to spirits and alcohols to be manufactured after it came into force, but as, at the moment of the application of the Law, stocks of natural spirits were held by the producers and merchants, it was decided to continue the use of the old white receipts of 1872 for these spirits, and also for mixtures of these spirits with new ones which were qualified for the new white receipts. Also in order to permit these old spirits to profit by the certificate of origin instituted on the new white receipts it was decided to stamp the old bills

with the following mention:—"Acquit-à-caution 2B blanc créé pour les alcools de vin par l'article 8 de la loi du 2 août 1872."

It follows, therefore, from the above:—

First, that the white transport bill instituted in 1903, containing a certificate of origin, guarantees that the spirit it accompanies is produced exclusively from the distillation of wines, ciders, perry, pressed grapes, cherries or prunes, and that it has been distilled under the control of the Administration.

Second, that the old white transport bill of 1872, with its detachable leaf attests that the alcohol therein mentioned was declared in 1903 as being produced by the distillation of wine, cider, perry, etc., and that this declaration was accepted at the time by the service.

The dispositions of the Laws of March 31st, 1903, August 6th, 1905, and July 15th, 1907, of which mention has been made, have been modified by the Circulars No. 520, of April 4th, 1903 (p. 37-48), No. 613, of August 8th, 1905 (p. 14-16), and No. 696, of July 17th, 1907 (p. 265). A copy of each of these documents is herewith enclosed.

With regard to the control exercised by the Administration of Indirect Taxation on the production of spirits and alcohols qualified for the white transport bills, the regulations vary according as to whether the producers are distillers by profession of produce bought by them, or distillers of their own produce ("bouilleurs de cru").

In the former instance the regulation applicable is that of the 15th April, 1881, and in the latter case the regulation of August 19th, 1903.

These regulations are contained in the Circulars No. 325, of July 30th, 1881, and No. 538, of August 24th, 1903, of which a copy is enclosed.

Both of these regulations provide for a severe control, and enable the Administration to deliver the white transport bill (1903 model) guaranteeing that the spirits and alcohols manufactured and sent out by the producers, who, besides have to conform to Article 23 of the Law of March 31st, 1903, and Article 6 of the Law of August 6th, 1905, are genuine natural products.

Answer to Query 2.—In accordance with the terms of Article 7 of the Decree of September 3rd, 1907, containing regulations for the application of the Law respecting Frauds in Food Stuffs of August 1st, 1905, the description of *eau-de-vie* can be applied to mixtures of spirits derived from wines with spirits produced from other substances (such as beetroot, molasses, corn, etc.), but by Article 6 of this Decree the description of *eau-de-vie de vin* can only be applied to spirits distilled from wine, that is to say, potable spirits produced exclusively from the fermentation of fresh grapes, or fresh grape juice.

With regard to the description of "Cognac," it can only be applied, according to Art. 1 of the Decree of May 1st, 1909, to spirits manufactured from wines produced and distilled in the region of Cognac, which includes the greater part of the Departments of Charente-Inférieure and Charente, as well as several communes of the Departments of Dordogne and Deux-Sèvres.

Answer to Query 3.—As stated above, the names of the districts possessing an exclusive right to describe their produce as "Cognac" are contained in the Decree of May 1st, 1909.

This description can only be inscribed on the white transport bills described in paragraph 1 on condition that the wines from which the spirit is produced have been stored and distilled in buildings where no other kind of wine has been introduced, and that these spirits have been stored, from the time of their production to their delivery to the trade, in buildings separated by a public road from buildings where other spirits are stored. In a general way, therefore, the description of "Cognac" will only appear on bills relating to spirits to be produced in the future.

Enclosed are transmitted copies of Circulars Nos. 661, of August 23rd, 1906, 703, of September 21st, 1907, and 795, of May 19th, 1909, which give instructions to the Department of Indirect Taxation with regard to the application of the Frauds Law of August 1st, 1905, as well as of the Decrees of September 3rd, 1907, and May 1st, 1909, above mentioned.

Answer to Query 4.—No distinction is made in the statistics of production between potable spirits and industrial spirits.

The total quantities of pure alcohol produced have been:—

2,068,626	hectolitres in	1905.
2,700,831	,,	1906.
2,514,810	,,	1907.
2,538,030	,,	1908.

Spirits and alcohols derived from wine are included in the above quantities for the following amounts:—

262,725	hectolitres in	1905.
234,213	,,	1906.
239,877	,,	1907.
211,672	,,	1908.

The statistics of the production of alcohol having, up to the present, been gathered from each Department, it is not possible to determine exactly the amount produced in the region comprising the "Cognac" district, determined by the Decree of May 1st, 1909, as this district comprises besides nearly the entire Departments of Charente-Inférieure and Charente, several communes belonging to the Departments of Dordogne and Deux-Sèvres.

The production of alcohol distilled from wine in the Departments of Charente and Charente-Inférieure has been as follows:—

123,691	hectolitres in	1905.
135,050	,,	1906.
166,150	,,	1907.
77,677	,,	1908.

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FINAL REPORT

OF THE

ROYAL COMMISSION ON WHISKEY AND OTHER POTABLE SPIRITS.

Presented to both Houses of Parliament by Command of His Majesty.

London School of Hygiene & Tropical Medicine
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29 JAN. 1932

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EDWARD, *R. & I.*

EDWARD THE SEVENTH, by the Grace of God, of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas King, Defender of the Faith, to—

Our right trusty and well-beloved Councillor HENRY, BARON JAMES OF HEREFORD, Knight Grand Cross of Our Royal Victorian Order; and

Our trusty and well-beloved—

LAURENCE NUNNS GUILLEMARD, Esquire, Companion of Our Most Honourable Order of the Bath, Deputy Chairman of the Board of Inland Revenue;

WALTER ERNEST ADENEY, Esquire, Doctor of Science, Fellow of the Chemical Society;

JOHN ROSE BRADFORD, Esquire, Doctor of Medicine, Doctor of Science, Fellow of the Royal Society;

HORACE TABBERER BROWN, Esquire, Doctor of Laws, Fellow of the Royal Society;

GEORGE SEATON BUCHANAN, Esquire, Doctor of Medicine, Inspector of Foods to the Local Government Board of England;

JOHN YOUNG BUCHANAN, Esquire, Master of Arts, Fellow of the Royal Society; and

ARTHUR ROBERTSON CUSHNY, Esquire, Doctor of Medicine, Master in Surgery, Fellow of the Royal Society; Greeting!

Whereas We have deemed it expedient that a Commission should forthwith issue to inquire and report:—

1. Whether, in the general interest of the consumer, or in the interest of the public health, or otherwise, it is desirable—

(*a*) To place restrictions upon the materials or the processes which may be used in the manufacture or preparation in the United Kingdom of Scotch Whiskey, Irish Whiskey, or any spirit to which the term whiskey may be applied as a trade description;

(*b*) To require declarations to be made as to the materials, processes of manufacture or preparation, or age of any such spirit;

(*c*) To require a minimum period during which any such spirit should be matured in bond; and

(*d*) To extend any requirements of the kind mentioned in the two subdivisions immediately preceding to any such spirit imported into the United Kingdom.

2. By what means, if it be found desirable that any such restrictions, declarations or period should be prescribed, a uniform practice in this respect may be satisfactorily secured:

and to make the like inquiry and report as regards other kinds of potable spirits which are manufactured in or imported into the United Kingdom.

Now know ye that We, reposing great trust and confidence in your knowledge and ability, have authorized and appointed, and do by these Presents authorize and appoint you, the said Henry, Baron James of Hereford (Chairman); Laurence Nunns Guillemard; Walter Ernest Adeney; John Rose Bradford; Horace Tabberer Brown; George Seaton Buchanan; John Young Buchanan; and Arthur Robertson Cushny, to be Our Commissioners for the purposes of the said inquiry.

And for the better effecting the purposes of this Our Commission, We do by these Presents give and grant unto you, or any three or more of you, full power to call before you such persons as you shall judge likely to afford you any information upon the subject of this Our Commission; to call for information in writing; and also to

call for, have access to and examine all such books, documents, registers and records as may afford you the fullest information on the subject, and to inquire of and concerning the premises by all other lawful ways and means whatsoever.

And We do by these Presents authorize and empower you, or any of you, to visit and personally inspect such places as you may deem it expedient so to inspect for the more effectual carrying out of the purposes aforesaid, and to employ such persons as you may think fit to assist you in conducting any inquiry which you may hold.

And We do by these Presents will and ordain that this Our Commission shall continue in full force and virtue, and that you, Our said Commissioners, or any three or more of you, may from time to time proceed in the execution thereof, and of every matter and thing therein contained, although the same be not continued from time to time by adjournment.

And We do further ordain that you, or any three or more of you, have liberty to report your proceedings under this Our Commission from time to time if you shall judge it expedient so to do.

And Our further will and pleasure is that you do, with as little delay as possible report to Us, under your hands and seals, or under the hands and seals of any three or more of you, your opinion upon the matters herein submitted for your consideration.

And for the purpose of aiding you in your inquiries We hereby appoint Our trusty and well-beloved Aubrey Vere Symonds, Esquire, of the Local Government Board, to be Secretary to this Our Commission.

Given at Our Court at *St. James's*, the seventeenth day of February, one thousand nine hundred and eight, in the eighth year of Our Reign.

By His Majesty's Command.

H. J. GLADSTONE.

3,500.—Wt. T.L. 83. 8/09. J. T. & S.

ROYAL COMMISSION ON WHISKEY AND OTHER POTABLE SPIRITS.

FINAL REPORT.

TO THE KING'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY,

We, the undersigned Commissioners appointed by Your Majesty's Royal Warrant for the purposes therein mentioned, humbly beg to submit to Your Majesty our Report and the evidence upon which it is based.

Our first sitting took place on the 2nd March, 1908, since which date we have held 37 sittings for the purpose of taking evidence. At such sittings we examined 116 witnesses and considered various documents submitted to us. Since the commencement of the inquiry several of us have visited certain distilleries employed in the manufacture of whiskey in Scotland and Ireland, and also a number of distilleries and warehouses at which brandy is manufactured and dealt with in France.

WHISKEY.

We now propose in the first place to deal fully with the duties entrusted to us by Your Majesty's Royal Warrant in relation to "whiskey."

ORIGIN OF COMMISSION.

From time to time various attempts have been made to place restrictions upon the materials and the processes which may be used in the manufacture or preparation of the spirit sold under the term "whiskey," and public attention was specially directed to the question of the significance of this term in consequence of certain legal proceedings which were taken at the instance of the Council of the Metropolitan Borough of Islington.

Islington Prosecutions.

In November, 1905, two summonses were heard at the North London Police Court before Mr. E. Snow Fordham, the Stipendiary Magistrate, charging contravention of Section 6 of the Sale of Food and Drugs Act, 1875, these two summonses being selected as test cases out of twelve summonses issued. Bramall, 375 *et seq.* Walter, 937 *et seq.*

Against the one defendant, Mr. Wells, it was alleged that he had sold, to the prejudice of the purchaser who demanded Irish whiskey, something which was not of the nature, substance, and quality of Irish whiskey; and against the other defendant, Mr. Davidge, it was alleged that he had sold, to the prejudice of the purchaser who demanded Scotch whiskey, something which was not of the nature, substance, and quality of Scotch whiskey.

Dr. Teed, the Public Analyst of the Borough, analysed the samples, and certified as to each that it "consisted entirely of patent still, silent or neutral spirit." Whiskey, according to Dr. Teed's certificate, "should consist of spirit distilled in a pot still "derived from malted barley, mixed or not with unmalted barley and wheat or either "of them. Such whiskey contains at least a co-efficient or total of the above-mentioned "impurities of 380 parts per 100,000 fluid parts of absolute alcohol. Patent still "spirit contains from 89 to 204 parts of total impurities, with an average of 140 parts "per 100,000 fluid parts of absolute alcohol."

The learned magistrate came to the following conclusions:—

1. "That the patent still spirit alone is not whiskey."

2. That "the produce of the patent still unmixed with pot still whiskey cannot be Irish or Scotch whiskey although made in Ireland or Scotland."

3. That "the material to be used to produce Irish or Scotch whiskey . . . is, in Irish whiskey, barley malt as to about 75 per cent., and as to the rest of the mash, barley, wheat, oats, and rye, or any of them; and in Scotch whiskey it is wholly barley malt."

4. "That maize, not having been commonly used in the pot still or Irish or Scotch method of making whiskey, cannot be the material from which Irish or Scotch whiskey is derived."

5. That what the defendants "sold as Irish and Scotch whiskey respectively was patent still spirit made largely of maize to which had been added a dash, not 10 per cent., of Irish or Scotch whiskey."

6. That the one defendant's sample was "not Irish whiskey," and the other defendant's sample was "not Scotch whiskey, and Irish whiskey and Scotch whiskey having been demanded by the purchaser" from the two defendants respectively, that "each of the defendants did sell an article of food which was not of the nature, substance, and quality demanded."

7. That "the sales in these cases by the defendants were both to the prejudice of the purchaser."

The learned magistrate accordingly held that offences had been committed under the said section of the Sale of Food and Drugs Act, 1875, and convicted the defendants. Appeals to Quarter Sessions against the conviction proved abortive, as the justices hearing the appeals were equally divided. The cases then stood respited from time to time, until finally the appeals were withdrawn by arrangement in May, 1908.

Demand for Commission.

Bramall, 927
Usher, 7705-17

The result of these proceedings was regarded by whiskey traders as so serious that they resolved to unite with the common object of obtaining some final and authoritative settlement of the questions raised.

A meeting was held in Glasgow at which representatives of the Scotch and North of Ireland Grain Distillers, of the North of Scotland Malt Distillers' Association, of the West, South, and East of Scotland Malt Distillers' Association, and of the Wholesale Blenders' Associations of Edinburgh and Leith, Glasgow, Dundee, and Belfast, attended. At that meeting a deputation was appointed to wait upon the President of the Local Government Board. Upon doing so the deputation strongly urged the appointment of a Royal Commission, and, in view of these representations and of the important public interests which appeared to be involved, your Majesty was graciously pleased to appoint us to be your Commissioners for the purposes of inquiry into the matters mentioned in the Commission and into other matters cognate thereto.

It will thus be seen that the prominent questions moving the nomination of the Commission were:—

1. Whether the application of the term "whiskey" should or should not be restricted to spirit manufactured in pot stills;

2. Whether the spirit manufactured in patent stills should, either alone or when mixed with the product of pot stills, be allowed the use of the name "whiskey";

3. Whether restrictions should be placed upon the materials used in the manufacture of whiskey.

Interim Report.

Early in our proceedings we arrived at certain conclusions which we thought expedient to set out in an interim report made by us on the 24th day of June, 1908. These conclusions were as follows:— Cd. 4180/1908

1. That no restrictions should be placed upon the processes of, or apparatus used in, the distillation of any spirit to which the term "whiskey" may be applied as a trade description.

2. That the term "whiskey" having been recognised in the past as applicable to a potable spirit manufactured from (1) malt, or (2) malt and unmalted barley or other cereals, the application of the term "whiskey" should not be denied to the product manufactured from such materials.

But in the interim report we made certain reservations:—

> We left over for consideration the question of the advisability or otherwise of attaching special significance to particular designations such as "Scotch whiskey," "Irish whiskey," "Grain whiskey," and "Malt whiskey"; of placing restrictions upon the use of such designations as trade descriptions; or of requiring such designations to be used in connection with the sale of whiskey.
>
> And we also postponed stating the grounds upon which we arrived at the conclusions set out in the interim report.

Our present report therefore has to deal with the matters reserved and postponed as above, and also with the incidents affecting the subjects which we have inquired into other than whiskey.

Select Committee of 1890–1.

In the course of our inquiry we have derived great advantage from the labours and conclusions of the Select Committee on British and Foreign Spirits appointed by the House of Commons in 1890 and re-appointed in 1891. 210/1891

This Committee was appointed to consider "whether, on grounds of public "health, it is desirable that certain classes of spirits, British and foreign, should be "kept in bond for a definite period before they are allowed to pass into consumption, "and to inquire into the system of blending British and foreign spirits in or out of "bond, and into the propriety of applying the Sale of Food and Drugs Acts and the "Merchandise Marks Act to the case of British and foreign spirits and mixtures of "British and foreign spirits, and also into the sale of ether as an intoxicant."

The Committee expressed the view that they were "instructed to limit their "inquiries, in regard to the bonding and blending of spirits, to their effect on public "health," and that they were "empowered to consider whether the Merchandise Marks "Act and the Food and Drugs Act should be extended to spirits so as to enable the "public to know the character, origin, and state of purity of the products offered for "consumption and to limit the sale when they are deleterious."

The Committee was presided over by Sir Lyon Playfair and consisted of other eminent members of Parliament, many of them possessing considerable experience in commercial affairs.

The inquiry conducted by the Committee was very full and exhaustive, and a large number of witnesses were examined. We desire to call special attention to the following extracts from the Committee's report:—

> "There is no exact legal definition of spirits going by popular names, such as whiskey, brandy, rum, patent or silent spirits. Some witnesses desire to define whiskey as the spirit made in pot stills, and would deny that name to spirits made in patent stills, even though the proportions of malt and grain used in the production might be the same in both. Some of the distillers from malt desired that their whiskey should be called 'malt whiskey' though the general name 'whiskey' might be extended to those who mix malt with grain. On the other hand, certain distillers in Belfast and Scotland urged that spirits distilled in patent stills from malt and grain were entitled to be considered as whiskey; that they are used sometimes as such directly, and are now largely employed in blending pot still whiskey. They gave evidence that there was increased demand for whiskey of a milder kind, and that blends of pot still and patent still whiskey were in large demand by the consumers, who thus obtained a cheaper and a milder whiskey containing a smaller quantity of fusel oil and other bye-products.
>
> "Your Committee do not attempt a legal definition of whiskey. They would refer to the evidence of Dr. Pavy for a general and useful definition of spirits of various kinds, but this is too

general for a legal definition. Whiskey is certainly a spirit consisting of alcohol and water, with a small quantity of bye-products coming from malt or grain, which give to it a peculiar taste and aroma. It may be diluted with a certain quantity of water without ceasing to be whiskey, and it may be diluted with spirits containing little of the bye-products to suit the pocket and palate of customers, and it still goes by the popular name of whiskey. Your Committee are unable to restrict the use of the name as long as the spirits added are pure and contain no noxious ingredients."

* * * *

"Your Committee arranged with the Inland Revenue that about 50 samples of spirits should be collected from public-houses, shebeens, and fairs in various parts of the country to ascertain whether adulterations of a pernicious character might be put into them by the retailer before being given out to the customers. It is pleasing to say that not a single case of such adulteration was found. They varied greatly in strength, being from 14 to 30 under proof, but the spirit was normal."

* * * *

"The blending or mixing of different kinds of spirits, chiefly whiskey, has now become a large trade. From 13 to 14 million gallons are operated upon in warehouses in this way. It is stated that public taste requires whiskey of less marked characteristics than formerly, and to gratify this desire various blends are made, either by the mixture of pot still products, or by the addition of silent spirits from the patent stills. In the latter case cheapness is often the purpose of the blend, but it is also stated that it incorporates the mixture of several whiskeys more efficiently. The blends, even when made from old spirits of various kinds, are frequently kept in bond for a considerable time, although, in other cases, they enter into consumption soon after the mixture, according to the requirements or the convenience of the dealers. Foreign spirits are not allowed to be mixed with British spirits in bond, except for exportation, and even when duty paid seem to be little used for this purpose. British and Irish patent spirits are largely used in blending, those kinds being preferred which contain bye-products of distillation. They are purchased for this purpose by vendors and are not necessarily blended in bond.

"Some witnesses were of opinion that patent spirits should not be allowed to be blended with pot still products, but they admitted that this restriction could only be applied in bond, as the mixture could be made after payment of duties, and could not be detected by any chemical means. On the other hand, the Scotch and Belfast distillers, who make both pot still and patent still spirits, state that a large industry would be destroyed if any restrictions of this nature were put on their trade.

"Your Committee do not recommend any increased restrictions on blending spirits. The trade has now assumed large proportions, and it is the object of blending to meet the tastes and wants of the public, both in regard to quality and price. The addition of patent still spirits, even when it contains a very small amount of bye-products, may be viewed rather as a dilution than an adulteration, and, as in the case of the addition of water, is a legal act within the limits of strength regulating the sale of spirits."

* * * *

"Our general conclusion from the evidence submitted to us is, that compulsory bonding of all spirits for a certain period is unnecessary and would harass trade."

* * * *

"The conclusion of your Committee is that as the public show a marked preference for old spirits, which the trade find more profitable, and as the practice has arisen of blending whiskeys with patent spirits, to fit them for earlier consumption, it is not desirable to pass any compulsory law in regard to age, especially as the general feeling of the trade is that such an obligation would harass commerce, and be an unfair burden on particular classes of spirits."

* * * *

"The reference to your Committee instructs us to examine as to whether the Food and Drugs Acts mentioned (38 & 39 Vict. c. 73 (1875), and the amended Act, 42 & 43 Vict. c. 30 (1879), and the Merchandise Marks Act, 50 & 51 Vict. c. 28 (1887)), are applicable to the sale of spirits.

"The Food and Drugs Act is already used for this purpose, and frequent convictions have been made under it. Section 6 of the amended Act prohibits the sale of spirits at a less strength than 25 degrees under proof for brandy, whiskey, and rum, or 35 under proof in the case of gin. The original Food and Drugs Act (1875) (sec. 8) exempts any mixture or dilution of an article from penalty, if labelled to that effect. Your Committee are unable to recommend any further provisions as regards adulterations, because they have not found that the spirits of commerce are adulterated with any material noxious to health. Under Section 6 of the first Food and Drugs Act, a sale is illegal if the purchaser be prejudiced by buying 'any article of food or any drug which is not of the nature, substance, and quality demanded by the purchaser.' Under this section a vendor selling as malt whiskey spirits containing none of the bye-products of malt, or of malt and grain, could be detected in the present state of chemical knowledge, if the malt spirit had been made in a pot still. So far the present law applies. But your Committee are unable to recommend any standard of purity or impurity which could guide such conviction, because spirits when made in the same distillery, and still more those made in different distilleries, show considerable variations in the amount of the bye-products which give the character to spirits."

* * * *

"Your Committee, on a review of all the evidence before them, have come to the conclusion that a standard of purity cannot be applied to the spirits made in this country, or to those imported from abroad, for, although some very impure spirits are imported, they seem to be all accounted for by their use as methylated spirits, and are not employed as beverages."

It will be observed that almost every one of the subjects considered by us was submitted to the Committee and reported on by them.

We attach the utmost importance to these findings and should under any circumstances feel difficulty in over-ruling them; but as in the main the evidence taken before us confirms and strengthens the conclusions arrived at by the Committee, we have no doubt of their correctness.

Definitions of Whiskey by Witnesses who appeared before the Royal Commission.

The definitions of "Whiskey" in general, and of "Scotch Whiskey" and "Irish Whiskey" in particular, suggested by witnesses who gave evidence before us, were both numerous and varied. But these conflicting definitions appear to be based upon three different assertions of principle.

The first group of definitions would limit the use of the expression "Whiskey" to the spirit manufactured in the pot still exclusively, and would also apply the expression only to a spirit manufactured from certain prescribed materials, namely, malted barley in the case of Scotch Whiskey, and barley malted and unmalted with smaller proportions of wheat, oats, and rye in the case of Irish Whiskey.

Bramall, 445, 629
Jameson, 1378–83
Power, 1775–7
Gilbey, 1957–9, 1986, 2051
Mooney, 2114–6
O'Kelly, 2183
Daly, 2215
Nash, 2312–6
Doolan, 2345–6
Shaw, 2461
Pheysey, 2628–30, 2813
Plunkett, 2866–7
Everard, 2901
Geoghegan, 2908
Goff, 2940
Cotton, 2961
Downes, 2994
Nannetti, 3021
Teed, 3108–9
Clark, 10790
Meehan, 11176
McCallum, 11936
Hyland, 12031

The second group would admit the patent still product and would also admit other materials than the above, such as maize, but would exclude any other materials than cereal grains and would insist that the saccharification of the grains should be effected solely by the diastase of malt.

Walter, 958–65
Schidrowitz, 3931–6, 3965, 3969
Virtue, 4873–6
Ross, 5022
Calder, 5287–91
McPhail, 5717
Greenlees, 6436–8
Seaman, 6752
McDonald, 6955
Townsend, 7265
Scott, 7273
Greig, 7324
Brown, 7395
Mackinlay, 7576
Usher, 7781
Dawson, 8144
Nicholson, 8327–9
Keith, 9412
Lyon, 9646–7
Bowes, 9746–9
Dewar, 10861
Pratt, 11760–1
Haig, 11829
Chaplin, 12279
McKechnie, 12367

The third group would exclude no particular process and no particular materials, and would allow the use of the name "Whiskey" to any palatable alcoholic liquor distilled "from almost anything and anyhow;" but this view was not presented with any great force.

Craig, 10029
Mitchell, 11258

Regarded from another standpoint, the definitions may be divided into two classes according to the meaning attached to the use of the expressions "Irish" and "Scotch" respectively. One set of definitions gives these terms a geographical meaning, presenting the view that Irish Whiskey must be distilled in Ireland, and Scotch Whiskey in Scotland, also sometimes submitting that the materials from which the whiskey is manufactured must be indigenous to Ireland and Scotland respectively. The other set of definitions presents the terms "Irish" and "Scotch" as descriptive only of the character, taste, flavour, etc., of the spirit hitherto sold under such designations wherever manufactured; and in support of this contention parallel expressions such as "Irish Stew" and "Scotch Broth" were quoted.

e.g. Bramall, 445, 629
Walter, 958, 965
Jameson, 1378–83
Power, 1775–7
Gilbey, 1957–9
Teed, 3108
Calder, 5287–91
Seaman, 6769
Scott, 7284
Usher, 7783
Dawson, 8097
Dewar, 10871
Haig, 11828
McKechnie, 12373

Craig, 10182–10202, 10298, 10393

cf. Nicholson, 8406

Early History of Whiskey.

At first sight it seems strange that the definition of "Whiskey," a term now applied to a liquor which is so widely known, which for centuries past has been the national beverage in Scotland and Ireland, and which for some years has been very largely consumed in England, should give rise to such extreme differences of opinion. The explanation of these curiously divergent views is to be found in the uncertainty of the historical records relating to the subject.

We do not propose to enter minutely into the past history of or literature relating to whiskey, but the following brief sketch will, we trust, serve as a useful guide to a correct understanding of the present position.

The manufacture of alcohol undoubtedly dates from very early times. The name indicates that European countries owe their knowledge of the principle of the manufacture to the Arabs. The object of the original manufacturers was in all probability to produce a stimulant only. Hence the alcoholic liquid which they produced was named, according to the language of the different countries in which it was manufactured, "aqua vitae," "eau de vie," "uisque-beatha," "usquebaugh," etc., all meaning the same thing, namely, "water of life."

Craig, 10310 *et seq.*

But in course of time the advance of civilisation demanded a specially flavoured spirit rather than a mere stimulant, and it is only natural that the manufacturers in different countries, starting as they would generally with different materials, should have produced spirits of special flavours more or less peculiar to the country or district of origin. In the grape-growing countries spirit was produced from wine: in the northern countries, where the vine is not largely cultivated, spirit was produced from grain.

Appendix H

The date at which "aqua vitae" was first made in the British Isles is uncertain, but on reference to the Epitome of Statutes, printed in the Appendices to Vol. I. of the Minutes of Evidence, it will be seen that in Scotland the manufacture of spirits was a subject for legislation as early as the Sixteenth Century; and some works on "Distillation" published in the Seventeenth Century show that the method of distillation in use at that period was not essentially different from that practised in the pot still distilleries of Scotland at the present time.

ib.

Extracts from statutes seem to show that "aqua vitae" was not the exclusive product of malted barley, but that other substances such as unmalted grain were also used in the early days of distillation in Scotland.

Craig, 10050, 10120

The English statutes point to the same conclusion, and indeed in the year 1802 an Act of Parliament was passed, presumably owing to fear of scarcity during the continuance of the Napoleonic Wars, expressly prohibiting the distillation of spirits from any kind of grain.

Keith, 9324
Craig, 10010

The term "Whiskey" is not used in any of these statutes, and it does not seem to have been employed until the latter part of the Eighteenth Century. At that date it was undoubtedly synonymous in Scotland with "aqua vitae," and it is curious that Robert Burns applies to the same subject the three terms, "aqua vitae," "usquebae," and "whiskey."

Materials Used in the Manufacture of Whiskey since 1827.

Coming to more recent times, we propose first to give separate consideration to the materials used in the manufacture of whiskey and to the processes by which whiskey is produced. The differences in the character of the spirits which are obtained on the one hand from selected materials by pot still distillation and on the other from the wider range of materials which are available when the patent still is used will be considered later.

From 1827 onwards we have a record kept by the Excise Department of the quantity of spirits (in some cases estimated) made in each year in both pot and patent stills from the different descriptions of materials.

Appendix T, VIII.

It was shown by a Return set out in the Appendix that, while the great bulk of the spirits manufactured in Scotland and Ireland has throughout the period covered by the Return been made from malt or from malt and unmalted grain, a considerable quantity has from time to time been made from other materials, such as molasses, sugar, and potatoes.

An important question exists as to the products that are, or should be, included under the term "unmalted grain." This subject, which mainly affects the use of maize, will be dealt with hereafter. It will be observed that the Excise returns do not differentiate the different characters of the unmalted grain employed, and that the term unmalted grain would cover equally the unmalted barley, oats and rye which are used in Irish pot still distillation and the maize which is used in patent still distillation. It should further be noted that the spirits referred to include those used for rectification or for other than potable purposes.

In respect to Scotland, it will be seen that in the years 1827, 1828, and 1829, when pot stills alone were used, the quantity of spirits made from malt and grain was only a little less than the quantity made from malt only. After that date the quantity of spirits made from a mixed mash of malt and grain in the Scotch pot stills decreased. In 1847 the Scotch pot still distillers produced 47,203 proof gallons made from sugar; and in the period between 1852 and 1864 they used some molasses and sugar in addition to malt and grain. Since then, with the exception of the year 1887, when they made 78,588 gallons from molasses, they appear to have used only malt or malt and grain, the amount made from malt only being always largely in excess of that made from malt and unmalted grain. In the last few years, wherever the pot still process has been exclusively employed, malt only has been used.

Most of the spirit produced by the Scotch patent stills has been made from a mixed mash of malt and unmalted grain. It is remarkable that when the patent stills were first employed in Scotland, in the years 1830-1834, they were used for the production of spirit from malt only. Since then they have been increasingly used for the

manufacture of spirit from malt and unmalted grain. Other materials, however, have at times been largely used in the Scotch patent stills in the manufacture of spirits, but the evidence is silent as to the extent of potable spirits so produced. Between 1850 and 1860 the patent stills produced large quantities of spirit (3,860,643 proof gallons in 1855) from malt, grain, and molasses, sometimes from sugar also. In 1861, 1862, and 1863, these stills used molasses very largely, in 1862 no less than 2,631,600 proof gallons being made from molasses alone. After that date the use of molasses declined to some extent, but in 1872 the production of spirit from molasses alone was again over 1,000,000 gallons. No other materials except malt, unmalted grain, and molasses have ever been used on a large scale in Scotland, but a small quantity of spirit has been made at different times from sugar, potatoes, rice, madder root, dates, currants, starch, locust beans, saccharum, and malt extract. No evidence was placed before us as to the purposes for which this spirit was employed.

During the last eight years practically no materials other than malt and unmalted grain have been used in either pot or patent stills in Scotland.

The following Table, extracted and compressed from the Excise Return, shows the number of proof gallons of spirits made from different descriptions of materials in both pot and patent stills in Scotland in the years 1827, 1837, 1847, 1857, 1867, 1877, 1887, 1897, and 1907 respectively :—

		From Malt only.	From Malt and Grain	From Malt, Grain, and Molasses.	From Molasses.	From Sugar.	From Potatoes.	From Miscellaneous Materials.
		Proof gallons.	Proof gallons.	Proof gallons.	Proof gallons.	Proof gallons.	Proof gallons.	Proof gallons.
1827	Pot	2,671,877	2,659,725					
	Patent	—	—					
1837	Pot	6,067,140	2,372,740					
	Patent	111,809	571,054					
1847	Pot	5,006,443	427,310			47,203		
	Patent	800,185	2,314,035			1,206		
1857	Pot	5,469,294	47,581	—	—			—
	Patent	428,708	5,410,426	2,076,957	17,488 (also malt)			2,032 (madder root)
1867	Pot	4,767,457	10,806		—	—		
	Patent	615,572	5,325,373		348,952	5,730		
1877	Pot	7,162,472	—		—			
	Patent	98,776	11,380,982		310,869			
1887	Pot	7,384,810	470,691		78,588	—		
	Patent	95,808	9,395,729		134,880	198,820		
1897	Pot	13,979,437	81,715		—			
	Patent	92,905	17,300,084		14,628			
1907	Pot	10,487,685	—					—
	Patent	399,547	14,339,836					490 (malt extract)

A large majority of the Irish pot stills have always produced spirit from a mixed mash of malt and unmalted grain. The quantity of spirit made by them from malt only has always been small in comparison, the greatest amount in one year being 279,728 proof gallons in 1907, as against 3,313,446 from the mixed mash. No other materials than malt and unmalted grain have been used to any great extent in the Irish pot stills. 15,373 gallons were made from potatoes in 1843, and in 1852, 9,711 gallons were made from malt, grain, and molasses, and 8,248 from malt and molasses.

The Irish patent still distillers have also used chiefly malt and unmalted grain. Between 1852 and 1859 they produced a considerable quantity of spirit from malt, grain, and molasses (547,102 gallons in 1857), and in 1849 they made 416,458 gallons from malt, grain, and sugar.

With the exception of very small quantities of spirits made from molasses and sugar, no other materials than malt and unmalted grain have been used in either pot or patent stills during the last 50 years in Ireland.

The following table, extracted and compressed from the Excise Return, shows the number of proof gallons of spirits made from different descriptions of materials in both pot and patent stills in Ireland in the years 1827, 1837, 1847, 1857, 1867, 1877, 1887, 1897, and 1907 respectively:—

		From Malt only.	From Malt and Grain.	From Malt, Grain and Molasses.	From Molasses.	From Sugar.	From Potatoes.	From Miscellaneous Materials.
		Proof gallons.	Proof gallons.	Proof gallons.	Proof gallons.	Proof gallons.	Proof gallons.	Proof gallons.
1827	Pot	190,595	4,696,830					
	Patent	—	—					
1837	Pot	85,885	8,793,921					
	Patent	—	1,961,414					
1847	Pot	22,932	3,152,649			43,792	783	
	Patent	—	2,729,753			11,529	—	
1857	Pot	30,547	5,181,767	—				
	Patent	—	4,179,746	547,102				
1867	Pot	68,732	3,508,956					
	Patent	—	1,802,974					
1877	Pot	80,164	7,153,197					
	Patent	—	4,565,014					
1887	Pot	141,927	5,788,071					
	Patent	—	5,274,393					
1897	Pot	133,500	4,904,651					
	Patent	—	9,862,147					
1907	Pot	279,728	3,313,446					
	Patent	—	8,372,607					

Conclusions as to Materials.

The quantity of spirit made in Scotland and Ireland from malt alone or from a mixed mash of malt and unmalted grain has, throughout the period covered by the Excise Return, invariably been far in excess of the quantity made from any other description of materials; and in recent years practically no spirit has been distilled at any Scotch or Irish Distilleries from any materials other than malt and grain.

Whilst, therefore, the evidence furnished by this Return is sufficient to explain the conflicting definitions of whiskey which have been put forward, it appears to us that whiskey as a commercial product is regarded both by the manufacturers and by the public as a spirit made from no other materials than malt and unmalted grain, and is as a matter of fact so made at the present time; and we feel confident that the restriction of the application of the term "whiskey" to a product manufactured from malt and grain would meet with no opposition from any of the traders in whiskey.

Having come to this conclusion we have still to consider the further question whether any restrictions should be placed upon the descriptions of grain which may be so used.

Bramall, 445, 782. Jameson, 1378. Power, 1776. Plunkett, 2867. Bramall, 785. Teed, 3108–9. Plunkett, 2867, 2876. *c.f.* Everard, 2892. Geoghegan, 2915. Goff, 2934.

It was urged in evidence by certain witnesses that Irish whiskey should be made solely from grain actually grown in Ireland, and Scotch whiskey from grain actually grown in Scotland, or at all events that the grain used should be grain which is capable of being grown in Ireland and Scotland respectively. Irish whiskey it was contended should be made from a mixed mash consisting of malted barley, unmalted barley, and a little wheat, oats and rye; Scotch whiskey from barley malt alone. But some of the witnesses frankly admitted that their chief object in advocating such a restriction was to encourage native agriculture. Sir Horace Plunkett, for example, said that he was "much more interested in the agricultural community," and that barley "happens to be one of the crops we grow best, and if anything were done to discourage Irish barley growers it would have serious effects on the whole agricultural economy of Ireland." The economic effect on native agriculture of restricting the materials which may be used in the manufacture of whiskey is, however, a matter which we conceive to be

entirely outside our commission, and we therefore express no opinion on the question from that point of view. But we are satisfied that a large amount of foreign barley is commonly used in the manufacture of whiskey. In Scotland foreign barley is used alone in some of the patent still distilleries. In the Highlands pot still distillers have sometimes found it absolutely necessary to go abroad for their barley. The members of the Commission who visited Scotland in the spring of 1908 found that in nearly all the pot still distilleries which they inspected some foreign barley was being employed, owing to the poor quality of the 1907 crop. Had the use of foreign barley been prohibited, the manufacture of whiskey in the following season both by the pot and patent still process would have been most seriously interfered with. For the requirements of certain distilleries the quality of foreign barley is in some years better than the home-grown, and in these circumstances a veto on foreign barley would undoubtedly result not only in a diminished output but also in a marked deterioration in the quality of the whiskey produced. For these reasons we do not think it would be to the advantage either of the trade generally or of the public as consumers of whiskey to prohibit the use of foreign barley in the manufacture of whiskey.

Walter, 1095
Plunkett, 2883
Goff, 2943
Ross, 4995, 5002
Cahler, 5294-5
Cowie, 8976
Meehan, 11205-7

With regard to the different descriptions of grain, it will be observed that, while it is contended that Scotch whiskey should be made from malt alone, it is suggested by some of the witnesses that Irish whiskey should be made from a mixed mash of "malted and unmalted barley with small permissible additions of wheat, rye, "or oats, or any of them." These definitions are of course based on the existing practice in the majority of Scotch and Irish pot still distilleries. But it must be observed that there are pot still distillers in Ireland who use malt only in their mash, and it would be difficult to maintain that the spirit so produced is not entitled to be called "Irish Whiskey." Similarly, if a Scotch distiller chooses to put some unmalted barley, or some wheat, oats, or rye in his mash, we cannot think that the product of his manufacture should thereby forfeit the right to be called "Scotch Whiskey." The distinction seems to be altogether too arbitrary to justify such a definition.

Bramall, 445

Virtue, 4838-40
Clarke, 10772, 10792

The main purpose underlying these suggested definitions and the restrictions which would be based on them, appears to be to exclude the use of maize or "Indian Corn."

Maize is now very extensively used in the production of whiskey, both in Scotland and Ireland, especially in the patent still process. Those who object to its use in the manufacture of Scotch and Irish whiskey contend that being an American cereal no spirit manufactured from it can properly be called Irish or Scotch, that it is an inferior ingredient as compared with malted or unmalted barley, that the flavour obtained by using it differs essentially from the characteristic flavour of Scotch and Irish whiskey obtained by using malt and unmalted barley, and that it is only by employing the patent still process and thereby getting rid of the flavour that maize can be used at all.

Bramall, 445, 448, 468, 481

On the other hand it is maintained that maize began to be imported into this country in 1846 after the repeal of the Corn Laws, that during fifty years it has been "used as one of the constituents of the mash for the production of whiskey," that it is "being used at the present time in a pot still as one of the constituents of the "mash for the preparation of pot still whiskey," and that, as it is and has been used "like "other cereal grains because of the starchy matter contained therein," it is impossible to support the contention that it is a substance that should not be used for the preparation of whiskey.

Walter, 960

The objection to maize on the ground that it is of foreign growth must stand or fall as the objection to foreign barley.

That the flavour obtained by the distillation of spirit from a mash of which maize is the principal constituent differs materially from the flavour obtained from a mash of malt or malt and unmalted barley is indisputable. But we see no valid reason for excluding the use of maize in the manufacture of whiskey. There is no evidence to show that maize is not a perfectly wholesome material, and that being

Schidrowitz, 3941.

so we cannot recommend the prohibition of an article from which is produced a very large proportion of the whiskey of commerce, by which we mean the spirit which is regarded by a large section of the trade and accepted by the public as whiskey.

Processes.

The arguments by which it has been sought to support the contention that the product of the pot still is exclusively entitled to be called whiskey may for convenience be classified under three heads as—

(1) Historical,
(2) Chemical or technological, and
(3) Medical.

(1) Historical.

Bramall, 454-9 Teed, 3064, 16909

The historical argument is that the pot still process is the simple, natural, and original method of distillation; that in the early days of whiskey manufacture all whiskey was made by this process, no other process being known; that the patent still process, on the other hand, is of comparatively recent origin, that it was not at first intended for the manufacture of "whiskey" exclusively, but for the production of "spirit"; and, lastly, it was contended that the public do not regard the product of the patent still as whiskey, and when they ask for "whiskey" expect to be supplied with the pot still product only.

Walter, 980, 1041-2

Against this it is urged that historically the patent still represents an evolution from the primitive pot still which had passed through various progressive stages; that since 1831 the patent still has been used for the manufacture of what has been recognised both by the trade and the public as whiskey; that in certain districts of the United Kingdom patent still spirit by itself is bought and sold as whiskey; and that the great proportion of the whiskey of commerce, that is to say, the whiskey consumed in the United Kingdom or exported abroad, is a blend of pot and patent still spirit.

The claim for a prescriptive right of the pot still product alone to be called "whiskey," as above stated, is based upon the fact that until about 1830 all whiskey was manufactured in pot stills. But a product does not lose its name because an improved or even altered mode of manufacture is employed. Similarly, before 1820 persons travelled in carriages or on horseback. But when railways were invented those who journeyed in them did not cease to be "travellers." It was not claimed that only those who continued to be conveyed by the old methods were "travellers."

(2) Chemical.

Potable spirits are composed of water, ethylic alcohol and other substances which impart to them definite characters as regards flavour and aroma; and they may be classified according to the origin of these latter substances as (1) plain or naturally flavoured spirits, and (2) compounded or artificially flavoured spirits.

Plain Potable Spirits.

Bramall, 479

If we leave out of consideration the water, the main or primary constituent of a plain potable spirit is ethylic alcohol. In addition to the ethylic alcohol, there are small but variable amounts of other constituents which impart the characteristic flavours and aroma to the spirit. These latter constituents seldom exceed one-half per cent. of the ethylic alcohol. They are frequently called impurities or bye-products, but in view of their origin such terms are not wholly satisfactory. In this Report we have called these constituents "secondary products."

Under the term plain spirits the three following potable spirits are recognised by the British trade—Whiskey, Brandy, and Rum.

For the convenience of those who will read and consider this Report, we think that in dealing with the Chemistry and Technology of whiskey, it is advisable that we should repeat some of the facts already stated.

Whiskey.

Three processes have been in common use for many years past for the production of whiskey. They are the Irish Pot Still Process, the Scotch Pot Still Process, and the Patent Still Process.

Technologically these three processes have certain points in common. Each involves the following three operations— Tedder, 55

(1) Mashing, for the preparation of a liquor technically termed wort;
(2) Fermentation of the wort, for the preparation of a liquor called wash;
(3) Distillation of the wash, for the separation of the spirit.

The differences in character between the various classes and varieties of whiskey produced in Ireland and Scotland are mainly due (*a*) to the kind of materials selected, (*b*) to the relative proportions of these materials, (*c*) to the methods of mashing and fermentation employed, (*d*) to the type of still used for the third operation, and (*e*) to the exact mode by which the still is worked. Comparatively small variations in any of these operations may result in considerable differences in the character of the spirit finally obtained.

Mashing.—The choice of materials for use in the mash tun has been restricted in practice to malt and to unmalted cereals such as barley, maize, oats, rye and wheat.

For the manufacture of pot still whiskey in Scotland, barley-malt is generally the only material employed in the mash; but in the Irish pot-still distilleries, with the exception of three in which the Scotch practice in this particular is adopted, a mixture of barley-malt and unmalted barley, oats, wheat and rye is employed, maize being generally excluded.

We were informed that the proportions in which these materials are used are varied in different Irish distilleries, with a view of ensuring particular flavours in the whiskey to be obtained, but that it may be taken that generally four-fifths of the whole mash consists of barley, malted and unmalted, and that the remaining one-fifth is made up of oats, wheat and rye, in proportions decreasing in the order of enumeration. In the case of one Irish distillery, the precise proportions in which the materials were used are 38 per cent. malted barley, 58 per cent. unmalted barley, and 4 per cent. oats. Jameson, 1387-8. Power, 1838-40 Virtue, 4729.

The materials employed in the mash for the patent still process are much the same in both Scotland and Ireland. They are selected from malt, maize, barley, rye (malted and unmalted), and oats. The precise proportions in which they are used vary in different distilleries with the object which the distiller has in view. In one Scotch distillery the mash was made up of 25 per cent. malt, 72 per cent. maize, and 3 per cent. oats; in another of 30 per cent. malt, 30 per cent. rye, and 40 per cent. maize. In one Irish distillery it consisted of 35 per cent. malt, and 65 per cent. of a mixture of barley and maize; in another, malted barley, rye and maize were used in the proportions of 28, 36, and 36 per cent. respectively. Thorpe, 17978. Virtue, 4729.

Malted rye is also used in the mash in some patent still distilleries, it being considered to improve the body of the whiskey. Ross, 5194.

In several patent still distilleries yeast is produced as well as spirit for the market, and unmalted rye is then generally used because it is said to yield a wort especially favourable to the growth of yeast. Tedder, 53-4 Virtue, 4973 Ross, 5169-79 Calder, 5397-8

The malt, or mixture of malt and grain, is crushed, and extracted with hot water at a suitable temperature, by which treatment the starch of the grain is more or less converted into sugar by the action of the diastase of the malt. Other substances are at the same time obtained in solution from which the secondary constituents of the Tedder, 55. Dewar, 10862

finished whiskey are both directly and indirectly derived. The exact nature of these substances is not yet thoroughly understood. Dr. Bell, from his investigations made for the Select Committee of the House of Commons on British and Foreign Spirits (Report 1891), concluded that some of the essential oils naturally existing in the malt and grain, and the pyro and creosotic bodies with which the malt becomes impregnated during the process of drying over peat, anthracite, or coke fires, pass through the operations in a more or less chemically unchanged condition, thus imparting distinctive characters to the whiskey. This is especially the case when the usual forms of pot stills are employed for the distillation.

The liquor resulting from the mashing process is technically termed wort.

Tedder, 55-6

Fermentation.—After the completion of the process of mashing, the wort is drawn off, cooled to the proper temperature and conveyed to the fermenting vessels preparatory to the commencement of the process of fermentation. This is brought about by the addition of yeast which converts the sugar existing in the wort into ethylic alcohol, and under the combined influence of the yeast and the diastase left in the wort the whole of the products derived from the starch of the grain during the mashing process are ultimately fermented.

At the same time certain other constituents of the wort undergo chemical change, giving rise to substances which influence the flavour of the finished whiskey. Foremost amongst these substances are the higher alcohols, which have recently been shown by Ehrlich and others to owe their origin to the splitting up of certain nitrogenous substances (amino- acids) produced in the first place by the peptonising action of the malt in the mashing process.

The special nature of the yeast, the temperature at which it works, and the time occupied in fermentation are all factors which affect the ultimate result.

The liquor resulting from the process of fermentation is technically termed wash.

Distillation.—The third and last operation in the manufacture of whiskey is required for the purpose of separating the alcohol and secondary constituents from the wash. This is effected by subjecting the wash to heat in a suitable vessel, which is known as a still; the alcohol and secondary constituents pass over from the wash to a worm or cooling apparatus, and are there condensed and received into another vessel.

Originally the object of distillation as applied to potable spirits was no doubt the separation of the more volatile constituents from the less volatile and non-volatile constituents of the wash. In the course of time, however, it came to be recognised that by modifying the form of still, by collecting the distillate in fractions and not as a whole, and by redistilling, the more valuable portions of the spirit could be obtained in a more concentrated form; and that, in addition, the quality of the whiskey could be improved. Thus the distillation process not only involves the separation of the more volatile products of the wash, but the concentration and rectification of those bodies.

The distilling operations which are practised in connection with the pot still and patent still processes of manufacture are very dissimilar, and it will consequently be necessary to consider them separately.

Scotch Pot Still Process.—The simplest varieties of the pot still are to be met with in Scotland. A diagram illustrating the form commonly used in that country is given in Appendix B, Vol. 1 of the Minutes of Evidence.

Appendix B.

Tedder, 68-70

Walter, 974-6

The neck of the still is of considerable length. No doubt the original object in making it so long was to provide the means of preventing particles of the boiling liquid in the still from being mechanically carried over by frothing or spraying; but at the same time it must be recognised that a further important practical effect of the long neck is an enhanced power of rectification in operating the still.

This simple form of still is heated by direct fire, and apart from its long neck is not furnished with any special means to secure rectification during process of distillation.

Stills are, however, frequently used in Scotland which are provided with the means of increasing their power of rectification, in the shape of pipes or of circular vessels, called purifiers, which are fitted between the neck of the still and the condenser, and are cooled by water.

Some stills are also heated by means of steam pipes and steam jackets, instead of directly by fire. It is held by some distillers that this difference in method of heating has an important effect upon the character of the whiskey produced, in that the open fire causes a charring of the organic substances carried by the wash, which has the effect of adding empyreumatic bodies to those already present in the wash. Other authorities, however, contend that no difference is to be detected in the whiskey produced, whether steam pipes or direct fire be employed for heating the still.

Tedder, 68
Jameson, 1577
Power, 1794-5
Schidrowitz, 4089
Walker, 7133-5
Cowie, 8818-25, 8919-43.
Dewar, 10950
Appendix F.

In accordance with the common practice in Scotland, two distillations are required for preparing pot still whiskey from the wash. The first takes place in the "wash still." The distillation is continued until all the alcohol has been driven off from the wash and collected in one distillate. The liquor remaining in the still is termed "pot ale" or "burnt ale"; it is run to waste. The distillate, which is technically termed "low wines," contains all the alcohol and secondary constituents from the wash, and also some water. The low wines are transferred to a second and smaller still, and are re-distilled. Three fractions are obtained from this distillation. The first is termed "foreshots," the second constitutes the clean or finished whiskey, the third is called "feints." The foreshots and feints are collected together, and the residue in the still, called "spent lees," is run to waste like the pot ale.

The judgment and experience of the distiller determines the point at which the collection of foreshots is stopped, and that of whiskey commenced, and similarly that at which the latter is stopped, and the collection of feints begun.

The strength at which the whiskey fraction is run is of great importance as regards the character of the spirit. In Scotland this is generally from about 11 to 25 degrees over proof.

The foreshots and feints from a given distillation are mixed together and added to the charge of low wines for the next distillation, and so on through the distilling season. The feints collected from the last distillation of the season are kept for adding to the low wines from the first distillation of the succeeding season.

In some distilleries in Scotland the whiskey is produced from three distillations; this practice is very general in the Lowlands; the spirit is then run at 40 to 45 degrees overproof.

The volatile secondary constituents, which pass over with the alcohol into the low wines receiver, on the distillation of the wash, are thus incorporated as far as possible with the finished whiskey finally produced. There can be no doubt, however, that a portion does escape with the spent lees, since it is known that some undergo partial decomposition during the process of distillation (*), *e.g.*, certain esters are more or less easily decomposed when boiled with water under such conditions as those which obtain during distillation in the wash or low wines still, and the products of decomposition may wholly or partially remain in the spent lees and may consequently be absent from the whiskey.

Schidrowitz, 4116.
Tatlock, 5591-5601
Fernbach, 15797

Again, some of the constituents which may boil at much higher temperatures than water, may not wholly pass over with the alcohol or distillation of the low wines, but may remain in the spent lees, and so also be lost to the finished whiskey.

The extent to which the loss of secondary constituents may thus occur and affect the character of the whiskey largely depends upon the variety of pot still employed, and the manner of its operation, whether, for instance, the process of distillation be

(*) Report of Select Committee of House of Commons, 1891, Q. 3503.

carried on slowly or rapidly; and it also depends on the strength at which the whiskey fraction is run.

Jameson, 1571-85 1665-1712 Power, 1918-21

Irish Pot Still Process.—The pot stills employed in Ireland differ somewhat from those used in Scotland, and they are generally much larger, the wash still occasionally being of a capacity of 20,000 gallons. The head of the still is shorter, and in that used for the distillation of low wines and feints the pipe connecting the head of the still with the worm is of considerable length and passes through a trough of water, the result being that there is a certain amount of rectification effected in the spirit vapour on its way to the worm. This pipe is termed the "lyne arm" and is connected with the body of the still by what is known as a "return pipe" through which is conveyed to the still for re-distillation any liquid which is condensed in the pipe.

Three distillations appear to be universally practised in Ireland for obtaining pot still whiskey; and the method of collecting various fractions during a distillation appears to be more complicated than with the Scotch process. Strong low wines and weak low wines, strong feints and weak feints, are collected, and probably different practices in this connection obtain in every Irish distillery. The use of charcoal and also of soap is common in Ireland as in Scotland, the soap being used to prevent frothing in the wash still, and the charcoal in the low wines still for purifying purposes.

The whiskey fraction is also usually run at a higher strength than in the Scotch process, viz., from 25 to 50 degrees over proof.

Patent Still Process.—The form of patent still employed in Ireland and in Scotland is the same. By the term "patent still" is understood a continuously working still invented in 1831 by Aeneas Coffey.

Appendix B. Tedder, 71 Bramall, 488 Walter, 976 Schidrowitz, 4028 Appendix F.

A diagram of this still, as used at the present day, is given in Vol. 1 of the Minutes of Evidence, Appendix B. The still is arranged in two columns, one of which is called the rectifier, the other the analyser. Each column is sub-divided horizontally into a number of chambers made of wood, and braced together in an iron frame. The chambers are separated from one another by means of copper plates, which are provided with a large number of small perforations. Each plate is also provided with a safety valve and a drop pipe. The latter stands up about an inch above the plate, and passes through the same into a cup on the plate below. These drop pipes and cups are arranged at alternative ends of the succeeding chambers.

The still is operated as follows:—Steam is passed in at the base of the analyser and when both columns are filled with steam (the communication between the two being by the pipe marked "8" in the diagram), the wash is pumped from the still charger to near the top of the rectifier by way of the pipe marked "5" whence it pursues its course to the bottom of the rectifier in the continuation of pipe 5, which traverses each chamber twice by means of a double bend, as shown in the diagram. A double object is achieved by this arrangement. In the first place the wash is heated by the ascending steam and vapours, and, secondly, the latter are cooled by the descending wash. There is thus a saving of fuel and of condensing water. By the time the wash reaches the base of the rectifier it is almost at boiling point; it passes on in a continuation of the same pipe to the top of the analyser, and there it is discharged on to the perforated plate forming the base of the top chamber of the latter. The ascending steam being under pressure prevents the wash from passing through the small perforations, and the wash cannot pass to the next chamber until it has filled the first chamber to the level of the top of the drop pipe. It then overflows and passes to the plate below. The cups in which the drop pipes dip act as a seal and prevent the steam passing upward through them. Thus the wash gradually finds its way from the top to the bottom of the analyser and passes out of the latter by the spent liquid tube. The steam meanwhile has been passing continually upwards through the wash by means of the perforations in the plates. The wash is gradually deprived of its alcohol and other volatile constituents, and by the time it reaches the base of the analyser should be practically free from alcohol.

The alcoholic vapours, mixed with steam, pass over from the top of the analyser to the base of the rectifier by the impure vapour tube 8. Thence the vapours pass up the rectifier from chamber to chamber, and in so doing are gradually cooled by

the cold wash descending by the pipe 5 already referred to. The less volatile constituents of the mixed vapours gradually condense and fall to the base of the rectifier, and thence pass to the "hot feints" receiver marked 15A in the diagram.

At a certain point in the rectifier a temperature prevails which roughly corresponds to the condensation temperature of strong ethylic alcohol. In this region the ordinary perforated plate forming the base of the chambers is replaced by a stout copper sheet, pierced by a fairly wide pipe which stands up about two inches above the level of the copper sheet. The latter is termed the spirit plate. A pipe with two branches is fitted in position as indicated in the diagram to drain all liquid condensing on or falling back on to this spirit plate. Under normal conditions of working the greater part of the ethylic alcohol condenses naturally on or above the spirit plate; but in order to make the condensation more complete, some of the chambers above the spirit plate are sometimes fitted with coils through which cold water is passed. The spirit from the spirit plate is, according to its quality, run by one or other of the branches from the draining pipe to the "feints" or "impure distillate receiver," or to the spirit or "finished distillate" receiver; in practice, if the still be working properly, when the pure spirit commences to be collected it runs continuously until the close of the distillation.

Thus at the beginning and end of the distillation, when the spirit is not of sufficient strength, it is allowed to pass into the feints receiver, and is pumped back from there to the still. The "hot feints," which are collected in the receiver marked 15A, consist of a mixture of weak ethylic alcohol with an excess of fusel oil, that is to say, of higher alcohols, fatty esters, &c.; these hot feints are pumped continuously throughout the distillation to the analyser, and there redistilled.

From the above description it will be seen that the process of distillation which is carried on by steam in Coffey's patent still is continuous, and that the low wines are not collected as in the case of the pot still, but pass on to the rectifying column in the form of vapour, where they are resolved into strong spirits and feints. At the end of each distilling period, which occupies two or three days, the fusel oil can be removed from the hot feints receiver; frequently this is done by adding water to the liquid, when fusel oil rises to the surface, and may be skimmed off and sold for use in the arts and manufactures.

On examining a sample of fusel oil which he obtained from a patent still distillery producing "grain" whiskey, Dr. Bell ascertained that it was composed as follows (Report of 1891, Q. 3524):—

Amylic alcohol - - - - -	42·2 per cent.
Butylic alcohol - - - - -	33·4 per cent.
Propylic alcohol - - - - -	18·9 per cent.
Ethylic alcohol - - - - -	5·5 per cent.

Dr. Bell further found that the "hot feints" from a patent still distillery are remarkable for the amount of alcohol compounds of palmitic and oleic acids which they contain, and which are no doubt derived from the essential oils contained in the grain used in the production of the wash. As the steam passes through the descending wash in the patent still the oils become decomposed, and the fatty acids uniting with ethylic alcohol form palmitate and oleate of ethyl. (Q. 3533.)

Composition of Pot Still Whiskeys.

Chemical methods of investigation have not so far succeeded in establishing any definite relationship between the composition of the different varieties of Irish and Scotch pot still whiskeys and the particular characters which they possess as regards flavour and aroma. Schidrowitz, 4263

Some of the secondary constituents which the spirits contain are present in such minute quantities that they have so far eluded identification; but there can be no doubt that they exercise a very important influence upon the flavours and aromas of the spirits with which they are associated.

Of those constituents which have been identified, the quantity of no single one is determined in the course of an ordinary analysis. Many of them are allied in

chemical constitution and properties, and can consequently be grouped together as families of similar substances, *e.g.*, acids, aldehydes, esters (compound ethers), and "higher alcohols," that is, alcohols higher in the homologous series than ethyl alcohol, and it is the total quantities of these families of allied substances that are ordinarily estimated in an analysis.

Sch'drowitz, 4218 Tatlock, 5423 Thorpe, 17756, 17784, 17792, 17815, 17864

We are indebted to Dr. Thorpe, Dr. Schidrowitz and Dr. R. R. Tatlock for the analyses of a large number of Scotch, and of a few Irish, pot still whiskeys. They will be found in Appendices E, F and G to Volume 1 and in Appendix Q, Volume 2, of the Minutes of Evidence.

Schidrowitz, 4262

On reference to the analyses, it will be seen that there is a very wide variation between pot still whiskeys from different distilleries; and that there is a very wide variation between whiskeys from the same distilleries in different years.

But no relationship is discernible between the analytical results and the characteristic flavours of the spirits from which they were respectively obtained. Yet amongst the analyses are included some Irish pot still whiskeys, and some of all four classes into which Scotch pot still whiskeys are broadly divided, viz., Highland malts, Lowland malts, Campbeltowns, and Islays; and we have been informed by several witnesses that an expert taster can certainly distinguish between these different classes of whiskeys by their flavour.

Schidrowitz, 4214

Composition of Patent Still Whiskeys.

On reviewing the brief descriptions which have been given of the distilling operations which are practised in the production of pot still and patent still spirits, it becomes evident that the secondary constituents in the latter must be fewer in number, and generally less in total amount than those in the former class of whiskeys; and that consequently the patent still whiskeys must be less varied in character than pot still whiskeys. Analyses of patent still whiskeys will be found in the Appendices in which those of the pot still whiskeys above referred to are recorded.

Virtue, 4879-4882

Thorpe, 17903

Haig, 11934

It is admitted that patent still whiskeys do not show the same range of variation as pot still whiskeys. Indeed, from the evidence given by several witnesses, it seems doubtful whether Irish patent still whiskeys can be distinguished by their flavours from Scotch patent still whiskeys. But it must be remembered in this connection that the great bulk of patent still whiskey is specially manufactured for blending with pot still spirits.

We have already indicated one source of loss of flavouring constituents, which is peculiar to the patent still process; it is the separation of fusel oil through the "hot feints." Dr. Bell pointed out another as a result of the special investigations which he carried out for the Select Committee of the House of Commons. In the course of some experiments in connection with the changes which go on in the secondary constituents in whiskeys during maturation, he separated the empyreumatic and other substances from new pot still whiskey and from a series of samples of the same kind of whiskey bonded for different periods, and he found that those in the new spirit possessed an unpleasant odour combined with a malt flavour, but that those from the bonded spirits became more and more agreeable with increase of time of bonding. On making similar experiments with patent still whiskeys, he found that they are practically free from empyreumatic bodies even when new. (Q. 3605.)

(3) Medical.

A number of witnesses gave evidence with regard to the possible deleterious action of different varieties of whiskey. This evidence may be divided into two groups, first, that in which the witness was expressing a mere personal opinion, or was stating that which he believed to be an opinion held by a number of other persons. These opinions were usually based on effects said to be observed as a result of the consumption of some particular variety of whiskey. Certain witnesses stated that it was a matter of common knowledge that deleterious effects were attributable to particular varieties of spirit, but in support of such statement we were unable to elicit from any witness direct and conclusive evidence resting on observations conducted with any approach to scientific accuracy.

In the second group may be included the evidence of a smaller number of witnesses who had conducted experiments with scientific methods. The general tendency of the limited evidence thus given was to show that no conclusive proof of any special deleterious action could be attributed to any special variety of whiskey.

The action of whiskey or other spirit on the human subject is necessarily very complex, and depends, not only on the quantity consumed and on the fact or extent of dilution, but also on the idiosyncrasy of the individual consumer.

Many witnesses were inclined to attribute differences in the action of the spirit, and especially the production of deleterious effects, to differences in the nature and quantity of the secondary products such as higher alcohols, ethers, furfural, &c.

There are great individual differences not only between "pot still" and "patent still" spirit in these respects but also between different varieties of "pot still" and different varieties of "patent still" spirits. Although the differences between some of the "pot still" and the "patent still" whiskeys are very great, yet it is difficult to draw a hard and fast line between them, inasmuch as some patent still spirit may contain a higher proportion of some of these secondary products than some varieties of pot still. This adds materially to the difficulty of determining whether there are any broad points of difference in the physiological effects produced by pot still and patent still spirits respectively. Further, a highly-flavoured spirit may cause effects not obtained from one of less flavour owing to the effects which may be produced indirectly by the flavouring agent on the nervous system of the consumer, since many substances are known to produce marked effects on the digestive system merely as a result of the sensation produced by their flavour. In addition, a difficulty presents itself in the fact that a highly flavoured spirit is often partaken of in greater dilution than one containing a smaller proportion of secondary products.

The evidence before us failed to establish that any particular variety of whiskey was specially deleterious. Statements were not uncommonly made that new spirits and the cheaper variety of spirits consumed, for instance, at fairs, were specially liable to be deleterious and to cause some of the more severe symptoms associated with intoxication. This evidence generally amounted to little more than a mere statement, and we were unable to obtain proof within the personal cognizance of the witnesses. In some instances we were informed that it was the custom in certain distilleries for the workmen to consume new spirit, and that no specially deleterious effects had been observed to follow. On the other hand it would seem that spirit when new is apt to develop an unpleasant taste, and therefore would be rejected by many.

Dr. Thorpe gave us information as to the composition of a large number of whiskeys which had been obtained by Excise officers at fairs and public houses in low-class districts in England, Scotland and Ireland. The majority of the samples appear to have been merely new patent still whiskeys of an ordinary type, but a few in parts of Ireland were pot still whiskeys. We were unable to obtain evidence pointing to the presence of any known deleterious substances in excessive quantity in these spirits, or that any foreign substances had been added to them.

Thorpe, 18177. Schidrowitz, 4506. Appendix Q. v. Appendix R.

The general tendency of the evidence on these matters was to show that any specially evil effects observed were rather to be attributed to the excessive quantity consumed, than to any specially deleterious substance.

We also failed to obtain any evidence from medical witnesses with reference to the question whether particular diseases, known to be due to the excessive consumption of spirits, could be attributed in different degrees to any particular variety of spirit. There are many districts where large hospitals exist in the midst of a poor neighbourhood, where it is known that cheap varieties of spirit are sold, and although in such hospitals the evil effects of alcoholism are frequently observed, and there are many instances of disease due to alcohol, yet the medical men observing these cases have not associated particular diseases with varieties of spirits.

Some of the witnesses made the statement that patent still whiskey might possibly in certain instances be deleterious owing to the fact that such spirit might be distilled from damaged materials, and that these damaged materials might contain injurious and poisonous substances, but this statement was not made on any direct evidence that such ill effects had in any instance been observed. Although poisonous substances are known to exist in some grains as a result of disease of the grain, yet

there was no evidence that such substances can pass over in the distillate obtained from the product of the fermentation of such grain. We were unable to obtain any definite evidence pointing to the presence of poisonous ingredients in the distillate derived from damaged material.

A further question still presented itself whether, of the varieties of whiskey produced by the pot and patent still, one could be said to be more unwholesome than the other. Several witnesses expressed the opinion that the products of the patent still were injurious to health, or produced intoxication more readily or in a more violent form than pot still whiskey, and that this might be in part due to the fact, as they alleged, that patent still spirit produced a greater craving and a greater thirst than the pot still spirit. These statements appear, however, to be merely a general impression derived from hearsay. On the other hand, a number of witnesses stated, some from personal experience, that the consumption of pot still whiskey was liable to induce ill effects—such as indigestion and subsequent headache—and that this was especially to be observed in persons leading a sedentary life. The experience of most witnesses seemed to point to the conclusion, in which we concur, that whiskey derived from patent and pot still induces much the same effects if taken in the same quantity and in the same alcoholic strength.

Schidrowitz, 4140, 4435-8. Cowie, 8656, 8812. Stockman, 10555-70.

The only constituent of great importance from a hygienic point of view was stated by most of the scientific witnesses to be ethylic alcohol, the secondary products being of importance mainly in giving flavour to the spirit. A few witnesses held the opinion that the secondary products might produce slight effects other than those dependent on the mere flavour, but there was a conflict in the evidence of scientific witnesses on this point, and it was agreed that such effects, if any, were slight in amount. Further, certain witnesses examined the effects of large quantities of secondary products upon themselves and found, not only no difference between those prepared from patent and pot still whiskey respectively, but that such secondary products even when taken in large quantity produced little or no effect.

Tatlock, 5489. Stockman, 10594. Dewar, 10882-4.

A number of witnesses laid considerable stress on the fact that pot still whiskey could be drunk with greater degree of dilution than patent still whiskey and that therefore pot still whiskey might be a more satisfying and less dangerous beverage.

It must also be borne in mind that the difference in the amount of secondary products present in the whiskey produced by the pot still and patent still processes is not very great, and that therefore the actual amount of these secondary products in the quantity of whiskey usually consumed is small, and hence the physiological effect produced by these secondary products must also be small compared with the effects produced by the ethylic alcohol itself.

Although the higher alcohols which constitute a portion of the secondary products present in whiskey have themselves a different physiological action from that produced by ethylic alcohol, and this action is a more harmful one, yet the actual quantity of these substances present in whiskey is relatively so small compared with the quantity of ethylic alcohol that the action of the spirit when consumed is almost if not entirely dependent on the ethylic alcohol. One witness was of opinion that the presence of secondary products in whiskey led to the more rapid absorption of the spirit, but this conclusion did not seem to rest on any valid evidence.

With regard to the medicinal use of spirits it would seem that there has been a tendency of recent years to employ whiskey to a larger extent than formerly; but the practice in different parts of the country and in different hospitals varies. Formerly, brandy was undoubtedly employed, both dietetically and therapeutically, in the treatment of disease to a greater extent than at present. Whiskey has displaced brandy to a greater extent in dietetic treatment than in the treatment of acute diseases. In London from five to ten times as much brandy is ordered in hospitals as whiskey, although, as the evidence shows, there is considerable variation in the practice of different physicians at different hospitals. The bulk of these spirits, if not the whole of them, would be prescribed in the course of treatment of acute diseases. In Scotland whiskey is used to a greater extent even than in England. Most of the medical witnesses recommended that the spirits used in the treatment of disease should be of good quality and old. Some considered that pot-still whiskey was preferable for this purpose to the patent still variety, as they considered that more powerful medicinal properties were possessed by it owing to the larger percentage of secondary products. The majority of medical witnesses attached no importance to the question whether the

Church, 10458-70.

Stockman, 10582-4.

Stockman, 10551, 10586, 10591.

whiskey were pot or patent-still, and considered that the value of it in the treatment of disease depended essentially on the ethylic alcohol. This view was held by the majority of observers who had directed their attention to the subject, and some adduced definite evidence in support of the statement that no difference in the results obtained could be attributed to the mode of preparation of the whiskey. We concur in this view. Hutchison, 11032, 11040, 11052, 11100.

With regard to the dietetic use of whiskeys all the medical witnesses were agreed that flavour plays a part of considerable importance, since a whiskey that is unpalatable tends to interfere with digestion, while a whiskey that is agreeable to the patient may increase the activity of the digestive processes, and also exert a favourable mental effect quite apart from the direct effect dependent on the alcohol itself. On this account they held not only that a mature whiskey is preferable to a new whiskey, but also that whiskeys of different flavours may have a particular dietetic value in particular instances.

Blending.

The practice of blending (by which we understand the admixture of any two or more different whiskeys whether pot still or patent still) has an important bearing upon this section of our inquiry. It is a practice which has been steadily increasing for many years; and we think it well to call attention to the extracts quoted above from the Report of the Select Committee of 1890-91 with regard to the character and growth of the blending trade.

With regard to the blending of pot still and patent still whiskeys, the evidence given on behalf of the defence in the Islington case was summarised by Mr. Walter as follows:—That "for many years a patent still spirit had been used to blend with pot still spirit; that the blend produced by that was not a mere dilution, but was an essential feature to bring out the respective flavours of the pot and patent still; that it was necessary for the proper 'marrying' of the spirits that patent still spirit should be used; that the demand had largely arisen for milder spirits than the pot still spirits were—milder in flavour; that that want could only be met by the blending of pot still whiskey and patent still whiskey; that the products of different patent still distilleries were quite distinct in their flavours and in their qualities; that the prices paid for them varied; and that it was part of the blender's art and one of his most valuable trade secrets to know in what proportion to blend what patent still spirits and what pot still spirits in order to produce the particular flavour which his whiskey was known for." Walter, 1000.

We received evidence on the subject of blending which tends to confirm the foregoing contentions.

According to this evidence the blending of pot still and patent still whiskeys is practised in Scotland for the purpose of producing two distinct classes of spirits:—(1) mildly flavoured Scotch whiskeys of particular characters and good quality; (2) cheap, palatable Scotch whiskeys.

The technological considerations involved in the preparation of these two classes of spirits are quite different. Thus, with reference to the first, it will be understood from the description which we have given of the pot still processes that, while it is possible to preserve a particular "style" in the produce of a given pot still distillery, it is impossible to maintain a perfectly uniform flavour and aroma in it, since these will vary to some extent from season to season with the quality of the grain employed in the mash-tun, and from other conditions not under the complete control of the distiller. Walker, 7142-3. Greenlees, 6134

It was represented to us that it is possible to produce Scotch whiskeys of good quality, according to standard flavours and other characteristics, by blending together in proper proportions, spirits, well matured, from different distilleries, and that blenders exhibit their skill and experience in the various styles of whiskey, which they produce, and in the success with which they maintain uniformity in the flavour and quality belonging to the respective styles, from season to season.

Scotch pot still distillers admitted before us the necessity of blending the two classes of whiskeys, unless the pot still spirit be matured for a considerable number of years in wood, when in their opinion it is unnecessary. They claimed, Cowie, 8887-9.

Cowie, 8665-6.

however, that it is the pot still product which imparts character to the blend, and that consequently it must always be employed in a preponderating proportion in preparing the blend if the reputation, which the best classes of Scotch whiskey have gained, is to be maintained.

Virtue, 4922. Cowie, 8888. Virtue, 4817-9. Clarke, 10820-3 Virtue, 4818

The preparation of the second class of blends involves different considerations. The principal object in this case is the production of cheap and palatable Scotch whiskeys. It is necessary for pot still spirits to mature in wood in order that they should acquire a pleasant flavour. Patent still whiskeys, on the other hand, although they are improved by keeping in wood, change to a less extent and mature much more quickly, and it is stated that the blending of immature pot still with patent still whiskey has the effect of attenuating or toning down the pungent, unpleasant taste of the former, and that the mixture then becomes "a palatable and not unwholesome spirit." Such a mixture would, if kept in wood, mature in a shorter time than the pot still whiskey would by itself.

The proportion of pot still to patent still whiskey in these cheap blends is varied chiefly in accordance with the price to be paid for them. The cheapest blends may contain as little as ten per cent. of the former, and even less.

Jameson, 1444 Power, 1804-7 Mooney, 2142-5, 2153 Shaw, 2468

Clarke, 10804-5.

The evidence which was given before us as to the practice of blending in Ireland, shows that it is carried on largely in that country mainly with a view of producing the cheaper classes of Irish whiskey. Some witnesses from Ireland who manufacture only pot still whiskey claimed that it is unnecessary for any reason to blend the product from the Irish pot still process, when matured, with patent still whiskey. Others, however, admitted that the practice is allowable and desirable for the preparation of the cheaper classes of Irish whiskey.

Greenlees, 6374. Craig, 10155

Several of the witnesses pointed out to us that when whiskey was first introduced into England on a commercial scale the demand was almost entirely for Irish Whiskey, and it has been suggested that the explanation of this was that Irish Whiskey, by reason of the mixed mash, the absence of the peat flavour, and the third distillation, was a less full flavoured beverage than Scotch Malt Whiskey. Another reason for this preference was probably the more uniform character of Irish Whiskey as contrasted with the flavours of the different classes of Scotch Whiskey, each of these classes having distinct flavours, and there being no very marked characteristic common to them.

Greenlees, 6368. Haig, 11803.

Blending for the English and foreign markets on a large scale seems to have commenced between 30 and 40 years ago. Since that time the practice has gone on increasing. It has undoubtedly done very much to popularise Scotch Whiskey. At the present time the demand for blended whiskeys is certainly greater, in England at any rate, than the demand for what are termed "self-whiskeys," that is, the unblended products of individual distilleries. The so-called "proprietary whiskeys," the whiskeys which are sold not under the names of the distilleries but under the name of well-known firms who put them on the market, are with very few exceptions, blended whiskeys.

Greenlees, 6433-4.

In competition with "self-whiskeys," the proprietor of a blend starts with many manifest advantages. In Scotland there are 150 distilleries at work, and not only do the products of these different distilleries vary one from another, but in different seasons the make of each distillery may vary owing to difference in the quality of the malt. Hence as self-whiskeys the products of these different distilleries only appeal to the palates of a limited number of consumers. In the blend, on the other hand, these differences are minimised, if not entirely nullified. The blender may purchase and mix together the product of so many different distilleries, that he gets rid of the pronounced flavour of any particular whiskey. He is thus enabled to put on the market year by year a blended whiskey of almost unvarying uniformity of character. The pronounced flavour of each individual whiskey suits the taste of a comparatively limited number of consumers, whereas the blend, especially in England and in the Colonies, appeals to a very much larger number. The use of patent still whiskey is said still further to assist the blender in his endeavour efficiently to incorporate or "marry" the different components of the blend and to produce a beverage of a comparatively mild flavour.

Blending with patent still whiskey, again, cheapens production, because the patent still spirit which is used in the blend costs less to manufacture than pot still spirit. Tolder, 189, 281-3 Bramall, 510-18, 598-602 Walter, 992

The blend, therefore, produces a more mildly flavoured and generally a cheaper article than the individual pot still whiskey. The market for blended whiskeys is greater than that for the individual whiskeys; so much so, that it would probably be safe to say that the majority of Englishmen who drink whiskey seldom drink anything but a blend. We are bound, therefore, to take into consideration the fact that any undue interference with the practice would not only destroy a flourishing industry, but would also prejudicially affect large numbers of the public. Jameson, 1445, 1521 Power, 1802-4 Gilbey, 2007-11 Ross, 5056-9, 5064-75, 5151-8 Greenlees, 6413 Cowie, 8712

Conclusions as to Processes.

The conclusions to which we have come on this part of our inquiry may be summarised as follows :—

The spirit which is produced and sold to the public in the United Kingdom at the present time under the name of whiskey is distilled in various kinds of apparatus which may be broadly classified as pot and patent stills. The former are used in the manufacture of whiskeys with special and pronounced characteristics in the matter of flavour and taste. They vary *inter se*, those used in Ireland for the distillation of a fermented wort, derived from malt and unmalted barley, rye and oats, differing, for example, in some respects from those used in Scotland for the distillation of worts obtained solely from malt. The patent still, as applied to the production of whiskey in this country, is used for the distillation of fermented worts derived from various cereals, principally maize, with the addition of a proportion of malt. It is adapted for the economical production from such materials of whiskeys which in general have less of the pronounced characteristics above referred to.

In the distilling season 1906-7 there were in England 8, in Scotland 150, and in Ireland 27 distilleries actually working. In England 3 of these distilleries were using both pot and patent stills and 5 patent stills only. In Scotland 137 were using pot stills only, 10 were using patent stills only, and 3 were using both pot and patent stills. In Ireland 18 were using pot stills only, 2 were using patent stills only, and 7 were using both pot and patent stills. Appendix A,1.

But the patent still distilleries are of so much greater productive capacity than those using the pot stills that, in the year 1907, 22,000,000 proof gallons of spirits were produced from patent still distilleries in Scotland and Ireland against 14,000,000 proof gallons produced from pot stills. Thus, nearly two-thirds of the potable spirits produced at the present time in Scotland and Ireland are distilled in patent stills. Appendix T, VIII.

The evidence which we received shows that such spirits have been frequently described as "whiskey" by distillers and traders since the patent still came into use; and that for many years a section of the public, particularly in parts of Scotland and Ireland, has recognised patent still spirit without admixture under the name of whiskey, and has purchased it as whiskey, no attempt being made by distillers or vendors to conceal the method of distillation. Moreover, spirit produced in the patent still, as we have shown, has long been employed for blending with or diluting whiskeys of different character and distilled in different forms of still. This has been by far its largest use, and most of the whiskey now sold in the United Kingdom contains in greater or less degree spirit which has been obtained by patent still distillation. Walter, 1005, 1015-18 Cowan, 4590-8 4610-17, 4670 Virtue, 4847-59 Ross, 5084-7 Thomson, 5851 Yule, 5935, 5978-9 Craig, 10242-56 Mitchell, 11372-4, 11427-31a Haig, 11847-8 McKechnie, 12384-91

Again, apart from the fact that pot stills differ so much that a comprehensive legal definition would be difficult to frame without either excluding certain types of still which are now commonly recognised as pot stills, or including other types which are not now looked upon as legitimate variations of the pot still, there are strong objections to hampering the development of an industry by stereotyping particular forms of apparatus.

Finally, we have received no evidence to show that the form of still has any necessary relation to the wholesomeness of the spirit produced.

For these reasons we are unable to recommend that the use of the word "whiskey" should be restricted to spirit manufactured by the pot still process.

The Special Significance of the Terms "Scotch Whiskey" and "Irish Whiskey."

We have now given in full the grounds upon which we arrived at the conclusions stated in the Interim Report. We have still to consider, in connection with paragraph I. (*a*) of the Terms of Reference, whether it is desirable to place restrictions upon the materials or the processes which may be used in the manufacture or preparation of "Scotch whiskey" and "Irish whiskey" respectively.

A number of the witnesses whom we called before us, while holding that the blending of patent still spirit with the pot still product was a perfectly legitimate operation, were nevertheless anxious that the reputation which "Scotch whiskey" and "Irish whiskey" at present enjoy should be maintained, and that the public should be protected against an inferior article, by withholding the title of "Scotch whiskey" and "Irish whiskey" from any spirits not manufactured in such a way as to ensure their attaining a minimum standard of quality. With this object two suggestions were made to us, which for convenience may be called (1) the standardisation of the mash, and (2) the standardisation of the blend.

(1) *The Standardisation of the Mash.*

Seaman, 6754-7, 6772-91, 6808-13, 6921-41
Walker, 7123-31, 7174-8, 7187-92
Usher, 7783-5

The witnesses who favoured this suggestion urged that the term "Scotch whiskey" should be restricted to whiskey distilled in Scotland from a mash consisting of certain cereals, viz:—barley, oats, maize, and rye, and that the mash should contain not less than 30 per cent. of malt, as is generally the practice in the manufacture of Scotch grain whiskey in Scotland at the present time. So far as the limitation of the materials which may be used in the manufacture of whiskey to cereals only is concerned, there would be no difficulty in carrying out this suggestion, which would merely stereotype the existing practice.

Schidrowitz, 3940

Tedder, 53-4
Virtue, 4973
Ross, 5169-79
Calder, 5397-8

The demand for a minimum quantity of malt, on the other hand, raises a number of practical difficulties. It is probably true that the Scotch grain distillers at the present time use as a rule about 30 per cent. of malt in the mash tun, and that, while not advocating the principle themselves, they would as a matter of fact raise no objection if the minimum were imposed; for, in the first place, if only cereals are to be used and no acid is to be allowed for the conversion of the grain, a certain amount of malt must in any case be used to effect saccharification. Secondly, it must be remembered that a large number of the grain distilleries produce yeast, and for yeast production a considerable quantity of malt is essential.

There is, however, the practical difficulty of defining malt for this purpose. Firstly, it would have to be decided whether the term should be confined in this connection to barley malt or whether it should apply to any germinated cereal. Secondly, the extent to which germination was to be carried would have to be decided, and the difficulty of dealing with green malt would have to be considered. Thirdly, as is well known, there are always, especially in bad seasons, grains which fail to germinate, called "liebacks," and, presumably, some examination of the malt would be required in order to prevent an undue proportion of these.

While we do not suppose that any of the above objections would be fatal, nevertheless we consider them sufficiently serious to make us hesitate to recommend the adoption of this proposal. We are not sure that the imposition of the proposed minimum quantity of malt would, as a matter of fact, be of much advantage either to the distillers, the blenders, or the public. So long as the materials are confined to grain and the conversion of the grain by any process other than the use of malt is excluded, a certain quantity of malt sufficient to saccharify the grain completely must always be used, and we see no reason to suppose that the distillers will be likely in the future to employ a smaller quantity than they are using at the present time. There is no evidence to show that the use of the smaller quantity of malt is in any way deleterious or injurious to health.

(2) *Standardisation of the Blend.*

The second suggestion which was made to us by those who wished to standardise whiskey was that in any blend of pot still and patent still spirits the pot still spirit should be the predominant partner of the blend, and with this object it was urged that the expressions "Scotch whiskey" and "Irish whiskey" should be limited to spirits containing at least some definite proportion, *e.g.*, 50 per cent. of Scotch pot still and Irish pot still whiskey respectively. This suggestion did not find as many supporters as the suggestion of standardising the mash, the great objection to it being apparent to most of the blenders. Assuming for the moment that the enforcement of this restriction is practicable, the first objection is that it would be misleading to the purchaser, for it would place on the same level spirits of very different quality. It would confer the title of Scotch or Irish whiskey on some inferior blends while denying the terms to blends of a comparatively superior character. For example, a blend composed of 55 per cent. of new Lowland malt whiskey of poor quality with 45 per cent. of new grain spirit would fall within the definition, whereas a blend of 45 per cent. of well matured Highland malt with 55 per cent. of old grain spirit would be excluded, despite the fact that in the opinion of most members of the trade the latter would be a far superior product. Again, certain witnesses declared that such a restriction would cripple the blending trade, inasmuch as in certain districts there was a distinct demand for what are termed the lighter whiskeys, viz., whiskeys with less than 50 per cent. of malt spirit, and these witnesses are probably right in thinking that, if such blends as these were now to be called by some other name than "Scotch" or "Irish whiskey," the demand for them would be in danger of ceasing altogether. But, apart from these objections, the difficulties of enforcing such a standard seems to us very grave. So far as blending in bond is concerned, the Excise authorities might possibly be able to exercise an effective control; but when the blending is carried on out of bond, they would be powerless to enforce the restriction.

Walker, 7055-7101
Cowie, 8665-6, 8697-8711
Grant, 9163-5, 9207-21
Greig, 7340-4, 7364-5, 7379-80
Usher, 7765

The proportion of the different whiskeys to be employed in these blends is controlled by an influence stronger than that of the law. The taste of the consumer creates the demand which ultimately controls the trade. The public purchases the whiskey that meets its taste, and the blender must satisfy that taste or lose his trade. It is not for the State to say what that taste ought to be.

In our opinion the use of the terms "Scotch" and "Irish" as applied to whiskey cannot be denied to any whiskey distilled in Scotland and Ireland respectively.

General Conclusion.

Our general conclusion, therefore, on this part of our inquiry is that "whiskey" is a spirit obtained by distillation from a mash of cereal grains saccharified by the diastase of malt; that "Scotch whiskey" is whiskey, as above defined, distilled in Scotland; and that "Irish whiskey" is whiskey, as above defined, distilled in Ireland.

Declarations.

Some difficulty exists in fulfilling the duty imposed upon us to inquire and report whether it is desirable to require declarations to be made as to the materials, processes of manufacture or preparation, or age of Scotch whiskey, Irish whiskey, or any spirit to which the term whiskey may be applied as a trade description.

It will be observed that the determination of this question was not dealt with in our Interim Report.

After a full consideration we report that it is not desirable to require that such declarations should be made.

Interference with trade by the State either by legislation or administration must be justified by its necessity arising from the existence of some evil which, in the interests of the public, requires to be prevented.

For instance, such interference may be justified for the purpose of defeating fraud or semi-fraud, or to protect public health, or to prevent injurious adulteration.

The State has already recognised the duty of affording a certain amount of protection to the public by means of the provisions contained in the Sale of Food and Drugs Acts and the Merchandise Marks Acts. These Acts have been frequently employed to safeguard public interests. The use and efficiency of these Acts as applied to spirits is considered in a later section of our report.

But when searching for reasons why special legislation should be applied to whiskey we had difficulty in finding them.

Power, 1930, 1935

In the numerous distilleries existing in the United Kingdom the trade in whiskey seems to be honestly and fairly conducted. No frauds or semi-frauds were alleged to be practised.

It was not contended before us that the wholesale merchant in his dealings with the distiller, or the retail merchant in his dealings with the wholesale merchant, needed any further protection from the State.

Bramall, 657-681, 16801-10, 16822-76
Power, 1813-19

It is clear from the statements of several witnesses that in the matter of the labels on whiskey supplied to the consumer in bottles there is a considerable amount of misdescription. We deal with this matter elsewhere in our report.

Bramall, 600-602

But the wrong that was specially alleged to require a remedy was that it was not uncommon for a licensed victualler, when selling an inferior whiskey by the glassful, to charge the price which ought to attach to an expensive whiskey.

Looking at such a transaction the suggested compulsory labelling or designation affords no remedy.

The customer asks for a glass of whiskey and gets it. As a rule he does not ask for any particular description of whiskey. The customer knows what he likes, and if he does not get it he seeks for it elsewhere.

But another objection which lies to the proposed compulsory designation or labelling, is that it cannot be effectively carried out.

What is to be labelled? For the purposes of trade the glass cannot be labelled, and the licensed victualler cannot be called upon always to show a label which the customer does not want to see.

Bramall, 657-662
Jameson, 1476-1551
Power, 1813-15

The witnesses who argued in favour of compulsory declarations appear to have been influenced by the belief that the consumer could be given by the Excise authorities a satisfactory guarantee as to the origin, composition, age, and quality of any spirit purchased by him. The casks at the distillery, they said, are already marked, but when the spirit is bottled the distinctive mark is lost. They accordingly suggested that a mark should be employed, and the accuracy of the mark guaranteed by the Excise at every stage from the distillery to the consumer.

Appendix T, III.

In order fully to understand this question, it is necessary to bear in mind that there are two stages in the life of all potable spirits: the first stage when it is in the keeping of the Revenue authorities, either in the distillery or in the bonded warehouse; and the second stage when it has paid duty and passed out of their control. It is obvious that, however strict the regulations in the distillery and in the bonded warehouse are made, however thorough be the supervision of the Revenue authorities, the consumer will obtain no real security unless the spirit after it leaves bond can continue to be effectively supervised.

It is not known what proportion of the spirits that are bottled for consumption are bottled in bond, while of course that which issues from bond in cask goes almost wholly to the trade, and may undergo considerable alteration before it reaches the consumer; therefore to supervise spirits in bond and to leave them free out of bond would be comparatively useless. Once spirits have left the bonded

premises, the Excise authorities are unable to watch over them so as to guarantee that they are not altered in their character or in their description before reaching the consumer, either by the alteration of the spirit itself or of the label on the vessel which contains it.

For the above reasons we have come to the conclusion that we cannot recommend compulsory labelling as a means of protecting the consumer of whiskey. At the same time, if any mark or label is used, such mark or label should be a true description of the spirit contained in the vessel to which the mark or label is affixed. The manufacturer or purveyor of an article of costly production and superior quality has an obvious right to derive what benefits he can from the mark or label descriptive of the article which he is selling; and in the interest of fair trading, as well as in that of the consumer, it is right that a competitor selling an inferior article should, if possible, be prevented from employing any description calculated to deceive the purchaser who wishes to buy the superior article. This is in effect the underlying principle both of Section 6 of the Sale of Food and Drugs Act, 1875, and of the Merchandise Marks Acts.

In determining what trade descriptions may legitimately be applied to different classes of whiskey, we consider that the best guide is to be found in the recognised custom of the trade at the present time.

For the purposes of the wholesale trade Scotch whiskeys are usually divided into five distinct classes, viz.: (1) Highland Malts, (2) Lowland Malts, (3) Campbeltowns, (4) Islays, and (5) Grains. Occasionally the Islays and the Campbeltowns are classed with the Highland whiskeys, which are sometimes sub-divided into Speyside and North Country whiskeys. Highland, Lowland, Campbeltown, and Islay may be regarded as geographical descriptions denoting the parts of Scotland in which these whiskeys have been distilled. They are all whiskeys made from malt only in pot stills. "Grains" is the name given in the trade to the patent still whiskeys. The blenders and wholesale houses, however, generally buy unblended whiskeys under the name of the distiller or distillery. Walter, 1005. Schidrowitz, 4214. Ross, 5117 Haig, 11910.

In the Irish wholesale trade it does not appear that there is any similar classification, practically all the self whiskeys being sold under distinctive names. The Irish patent still whiskeys, however, are, as in Scotland, sold under the name of "grains." Virtue, 4736 Virtue, 4847-9 Clarke, 10830

In the retail trade self whiskeys are usually sold under the name of the distiller or distillery, but the great proportion of bottled whiskeys is blended and goes either by the name of the blender or under some fanciful description, usually registered. These blended whiskeys are sometimes blends of different pot still whiskeys, but more often blends of pot still and patent still whiskeys. Usher, 7731

Labels and advertisements relating to bottled Scotch and Irish whiskeys in some cases specify the type or class to which the whiskey belongs. Thus a whiskey which has been obtained wholly by pot still distillation is often described as "pot still whiskey," and one which has been made from malt only as "malt whiskey"; while the terms "grain whiskey" or "patent still whiskey" are similarly used to inform the customer that the whiskey has been produced wholly by the use of the patent still.

With regard to the public-house or counter trade, the character of the whiskey sold depends largely on (1) the district in which the house is situated, and (2) the price paid for the whiskey. In England the ordinary whiskey would almost invariably be a blend of pot and patent still, in which the proportion of patent still whiskey would generally exceed that of the pot still. If the customer asked for a "special" whiskey he would usually be supplied with a blend, but a blend probably containing a larger proportion of pot still than the ordinary whiskey. In many cases, however, a customer who can afford to pay a fair price would ask for one of the proprietary whiskeys, knowing that in this case he would obtain an article which could be depended upon to possess a uniform quality and flavour acceptable to him. Greenlees, 6456-7

These proprietary whiskeys would, as we have before stated, nearly always be a blend of varying proportions of pot and patent still spirit, in which the pot still product

would ordinarily preponderate, except in the case of a few of the well-known Irish and Scotch whiskeys which are unblended pot still whiskeys.

Cowan, 4599, 4610-17
Ross, 5084-7
Thomson, 5851
Yule, 5935, 5978-9
Walter, 1015-7.
Cowan, 4670

In Edinburgh, Glasgow, and the Lowlands of Scotland generally the same practice would usually apply, but we received evidence to show that in parts of Fifeshire and in the neighbourhood of some of the patent still distilleries customers would sometimes ask for "Grain," and would in that case be supplied with unblended patent still whiskey. There was also one case mentioned in which an unblended patent still whiskey was sold as a "Special whiskey."

Yule, 5980
Cowie, 8721

In the North of Scotland, on the other hand, the customer asking simply for a glass of whiskey probably would, especially in the neighbourhood of the distilleries, obtain a pure malt whiskey. But even there pot and patent still blended whiskey would also be sold.

Nash, 2321
O'Kelly, 2204

In the south of Ireland or in Dublin, a customer would, if he was charged a fair price, expect to obtain either an unblended pot still whiskey or a blend of different pot still whiskeys.

Doolan, 2390
Quin, 2612-16
Virtue, 4753
Clarke, 10829-33
Mitchell, 11426

But there can be no doubt that a considerable quantity of blended pot and patent still whiskey is sold across the counter as Irish whiskey even in this part of Ireland, particularly when the price paid is low. In Belfast and the North the customer would generally obtain a blend of pot still and patent still.

Cowan, 4687
McDonald, 6954
Mackinlay, 7657-62
Dawson, 8107-9

With regard to the export trade, the evidence showed that a great proportion of the whiskey sent out of the country was a blend of pot and patent still production, the demand in India and the Colonies being generally for the lighter whiskeys.

BRANDY.

There is no statutory definition of the term "brandy"; nor is there any binding judicial decision on the subject. The word, it is true, has frequently been used in Acts of Parliament, but not in a sense which can be reconciled with the meaning which the term is at the present time usually assumed to convey. Our attention has been drawn to an Act of Parliament, passed in 1690 (2 Will. and Mary, c. 9.) which was entitled "An Act for the encouraging the distilling of brandy and spirits from corn," and the preamble of which runs "whereas good and wholesome brandies, *aqua vitæ* and spirits may be drawn and made from malted corn, &c." Since that date numerous Acts of Parliament have dealt with brandy made from corn, and "brandy" preceded by the qualification "British" was specifically mentioned in the Spirits Act, 1860, the 148th section of which was as follows:—

> "All spirits which shall have had any flavour communicated thereto, and all liquors whatsoever which shall be mixed or mingled with any such spirits, shall be deemed a British compound called 'British brandy.'"

This section was repealed in 1880, so that there is now no legal definition of British brandy.

Apart from this description of British brandy, the Legislature has not attempted to define the word brandy; and it is therefore useless to cite the language of statutes in support of any definition of the term.

Arguments based upon the origin of the word are equally inconclusive. The word is usually said to be derived from the German "branntwein"; but this is doubtful.

Schidrowitz, 15864.

Dr. Schidrowitz referred us to a paper by Mr. T. Fairley, published in "The Analyst" of 1905, in which the following passage occurs:—

> "The modern English word 'brandy' is quite as old as any of its Continental equivalents. As shown by the following examples, it was formerly spelt brandewine, brandwine, and brandy wine. The word 'brand' is common to all the Teutonic languages of Northern Europe, and means a thing burning, or that has been burnt, so that brandy or brandy wine, meaning burnt wine, is as old as the High German branntwein, the Dutch brandewijn, or the old French brandevin."

Again, the word "branntwein" in Germany does not mean much more than potable spirit. The application of the term to a given spirit does not necessarily imply that the spirit is derived from wine. Schidrowitz, 16011

No appeal, therefore, either to the language of Acts of Parliament or to the historical derivation of the word will help us to discover an authoritative definition of the term. And indeed, interesting though such researches may be, their result can have but little practical value. It will be well if we divert our minds from speculative inquiries of this nature, and devote our attention to the study of the brandy of commerce, in other words, of the spirit which is commonly bought and sold at the present day under the name "brandy."

The practical question which we must attempt to answer is, "What is the nature of the spirit which the ordinary consumer expects to obtain when he demands brandy?"

French Brandy.

The total quantity of spirit entered by the Customs under the description of brandy, which was imported into the United Kingdom from various foreign countries and British Possessions during the year 1907, was 2,343,762 gallons. Of this amount 2,194,748 gallons were shipped from France. Appendix C.I.

A study of the materials and processes employed in the manufacture of French brandy, and of the laws and regulations governing its production and sale in France, is therefore of primary importance.

With a view to facilitate our investigations, some members of the Commission visited France, and the information thus acquired has been most valuable. The French merchants and officials received the Commissioners who visited them with the utmost courtesy, and gave them every facility in their power. Moreover, Dr. Fernbach, of the Pasteur Institute, and a number of merchants came to England for the purpose of giving oral evidence before us.

The French name for what is known as brandy in this country is "eau-de-vie"; the term "eau-de-vie," however, is a generic one, legally applicable to spirit made from wine, cider, perry, grape skins (left after wine making), cherries, plums, or other fruit, and also to mixtures of such spirits, or to a mixture of any such "eau-de-vie" with any "alcool d'industrie," which is the name given to spirit produced from grain or beetroot. Martell, 15099 Hennessy, 15275-82 Martell, 15100

The term "eau-de-vie" used alone has, it will be seen, a somewhat wide signification. We understand that the public, in asking for spirit in "cafés," frequently make use of the expression "une fine," "fine champagne," and sometimes "un cognac." Martell, 15104-11

Wine spirit proper, "eau-de-vie de vin," is made in every part of France in which wine is made, but there would seem to be no doubt that the best brandies, in respect of flavour and commercial value, are made in the Cognac region. Next in order of commercial merit come the brandies made in the Armagnac, including the Marmande district; a certain amount of brandy is made in the Nantes district; while large quantities are made in the Midi, in the Hérault, Gard, Aude, and Pyrénées Orientales districts, these brandies being commonly known as the "Trois-Six de Montpellier." The "Eaux-de-vie de Marc," made from the residues of the wine-press, form still another class. Fernbach, 15772 Schidrowitz, 15889-90

Cognac Brandy.

"Cognac," as the description of a spirit, is not expressly defined in the French law, but the name "eau-de-vie de Cognac" or "Cognac" simply can only be applied legally to spirits made in the Cognac region from wine grown therein. It has for some time past been generally accepted that the Cognac region comprises a certain part of the two departments of Charente and Charente Inférieure, and there has recently been a legal delimitation of the area. Hennessy, 15264 Martell, 15037, 15102 Appendix V.

Hennessy, 15227*a*
Harrison, 15176

The region is locally subdivided into the Grande or Fine Champagne, the Petite Champagne, the Borderies, and the Bois, according to the quality of the wine produced. The soil is mainly calcareous; the grape grown is small in size and white in colour, and the wine is of inferior quality for drinking purposes.

Manufacture of Cognac.

Martell, 15170-2
Hennessy, 15228

Cognac brandy is manufactured in the Charentes both by the professional distiller and by the farmer who grows his own grapes and makes his own wine. Several firms buy nearly all the brandy they need from the farmers.

Harrison, 15140-55

The distilling apparatus in general use by both distiller and farmer is a simple pot still, varying in size from 7 to 9 hectolitres, *i.e.*, 154 to 198 gallons. The still, which is built in brickwork, having only a small bulbous head exposed, is generally heated by means of a furnace; in a few distilleries the stills are heated by steam, and there is some controversy between distillers using these different heating agents as to the respective merits of each. Wood is very generally used in the furnaces and is considered the best fuel.

Attached to the still is a vessel called a "chauffe-vin" which acts as a wine-heater; being filled with wine, through which the pipe conveying the spirit vapour to the refrigerator passes, it does duty at once as a wine-heater and as a partial refrigerator; the wine being heated in the vessel is quickly brought to boiling point when passed into the still, and there is thus a saving of fuel. But the "chauffe-vin" is not always used, even though the stills are provided with the vessels. In the process of manufacture there are two distillations which may be compared with the process of whiskey making in the Scotch pot-still distilleries; the resulting spirits of the two distillations are termed "brouillis," and "bonne chauffe," respectively, descriptions equivalent to the "low wines" and "spirits" of the whiskey distiller.

Harrison, 15159-60

In some distilleries, however, stills known by the appellation of "à premier jet" are in use. These produce the finished spirit at one continuous distillation. Attached to and above the ordinary head of the still is a vessel into which the condensed spirit of the first distillation is conveyed, and this spirit is vaporised by the heat of the spirit vapour rising from the still itself on its way to the refrigerator. The best distillers do not consider that this still can produce the finest spirit; it is used for producing spirit of a higher strength than ordinary, and also in the manufacture of liqueurs.

The stills are worked very slowly and regularly, ten hours being the normal time for completing the distillation of a charge of wine. The quality of the spirit depends greatly on the skill of the stillman in working the still.

The wine used in the manufacture of "Cognac" contains from 6 to 11 per cent. of pure alcohol, or, roughly, from 10 to 20 per cent. of proof spirit; the average strength is from 7½ to 8½ per cent. of alcohol or from 13 to 16 per cent. of proof spirit. The finished spirit is run from the still at a strength of about 25 over proof.

Hennessy, 15238-40
Schidrowitz, 15909

The brandy is sweetened with cane sugar, and slightly coloured, the object of colouring being merely, as in the case of whiskey, to keep a given brand up to a given level of colour.

Other French Brandies.

Fernbach, 15772

It was stated by Dr. Fernbach that the superiority of Cognac brandy is due to the special kind of wine which is submitted to distillation, and also to the distilling process.

Schidrowitz, 15891

Dr. Schidrowitz ascribed the inferiority of the Midi wines to the fact that "after the phylloxera the southern growers replanted their vineyards with vines which were not appropriate to the soil—vines which produced very large quantities of wine." The result of this policy, he said, was—

> "That they had an enormous glut of wines which were unstable and decidedly inferior to the wines which they used to grow. One of the results of that was the so-called wine war, which, I think, we all remember—it was the summer before last. Another result has been that a very large proportion of these wines are practically unsaleable, and they go to the still,

and it is frequently said that only wines which are diseased, or which have gone wrong, are sent to the stills in these districts. But I think that is undoubtedly not the case now. They cannot do anything else with these wines that are unstable; they cannot vend them; they are probably inferior to the Algerian wines, and the result is that they go to the still, and we get large quantities of these highly rectified brandies."

M. Combescure, a distiller of Béziers (Hérault), told us that damaged wines were only used to a small extent for distillation in the Midi. "The only way," he said, "in which they are used is for the industrial alcohols when they are highly rectified, but they are used with different apparatus to what I use for the eau-de-vie for consumption." Combescure, 16433

The simple pot stills used in the Charente, or even the modified stills known as "à premier jet," are unsuitable for wines with a strong "terroir" or other undesirable qualities. "The distiller," as Dr. Schidrowitz said, "will use the type of still which gives him the best results as regards quality and economy for the raw material on which he operates." Hence, in the La Rochelle district and in the islands a type of still is employed which is known as the "Alambic des Iles," and which is a simple pot still with a rectifying head. In the Midi the stills are of a much more complicated nature; the distillation is "continuous," that is to say, it is effected by one operation; the distilling column (colonne distillatoire) consists of a series of compartments separated by plates or "plateaux;" and, by means of taps connected with these "plateaux," it is possible to distil at higher or lower strengths at will. The stills are generally heated by direct fire. Hennessy, 15462-6 Schidrowitz, 15906 Combescure, 16466 Combescure, 16413

The evidence which we received seems to show that in the Midi wine only is used for distillation; and indeed, in view of the superfluity of wine in the South of France and the comparatively slight difference between the prices of wine and the prices of grain and beet, it seems hardly probable that the southern distillers would sacrifice the privilege of sending out their spirit under the "white" permit for the sake of any advantages which they might gain by using beet or grain as their raw material.

A large quantity of brandy is produced in the Midi. Speaking from memory, M. Combescure put the total production of the district at about 100,000 to 120,000 hectolitres, proof strength; but apparently most of it is consumed in France. It should be observed, however, that, prior at any rate to the official delimitation of the Cognac region, there has been nothing in the French law to prevent a Cognac merchant buying Midi brandy and exporting it from Cognac to this country as Cognac brandy. Combescure, 16439, 16443 Southard, 17506–8

Mr. Barnett-Smith worked out for us the comparative prices of Cognac and Midi brandies, and of grain and beet spirit. He took the actual price per liquid gallon as run off the still, and worked out an average for the last few years. As he pointed out, every year the prices differ according to the price of the wine, and therefore he wished his figures to be accepted with caution. According to his calculations the average price of the brandy of the best Cognac district (the Champagne district) was 7s. 2d. or 7s. 3d. per gallon, and the price of that of the cheapest Cognac district (the Bois) 3s. 2d. The average price of the different Cognac brandies taken together was 4s. 10d. per gallon, 5 overproof. As against this, the price of Midi brandy was 1s. 9d. per proof gallon; while the prices of grain and beet spirit were 1s. 2d. and 1s. respectively. Barnett-Smith, 16160 Combescure, 16427–31

Eaux-de-vie de Marc, or Marc Brandies.

The use of the term "eau-de-vie de marc" is restricted by the French law to spirit exclusively derived from the distillation of the skins of fresh grapes from which the greater part of the juice has been extracted. Hennessy, 15467-8 Thorpe, 18039

This class of spirit is entitled to the "acquit blanc," and some of it is said to be very fine and to command a high price.

We understand that the "dop" brandy of South Africa is produced in the same way as the French "eau-de-vie de marc."

We have no evidence that brandy of this class is imported to any material extent into this country.

The Phylloxera.

No account of the French brandy trade would be complete without some reference to the phylloxera disease.

Harrison, 15173 Hennessy, 15227

The date at which the disease commenced is uncertain, but its effects became serious in the Charente in 1875, and after 1878 the destruction of the vineyards was complete. The process of re-planting the vineyards with American stocks, on which the Charente vines have been grafted, has proved highly successful, but many difficulties were encountered before satisfactory results were obtained throughout the district, and some years elapsed before the whole of the Cognac area was replanted.*

Chaplin, 15987-8

During these years the output of genuine Cognac brandy was naturally diminished, and although some of the firms were able to draw on stocks of old brandy and refused to ship anything else, there is no doubt that a large quantity of spirit was exported from the Charente which was not the product of the district, and that some of it was a mixture of Cognac and grain spirit.

Before the phylloxera invasion most of the brandy exported to this country from France was genuine Cognac; but after the destruction of the Charente vineyards and the consequent diminished output and increased price of Cognac, brandies from other parts of France as well as from other countries were sent into this country in considerable quantities.

Harrison, 15197

Another result of the phylloxera is worthy of notice. The demand for brandy in bulk or cask from the Cognac firms of high standing has considerably diminished, while the bottle or case trade has increased.

Harrison, 15161

It is sometimes alleged that the more complicated forms of still came into use after the phylloxera; but this appears to be only true in the sense that greater quantities of brandy have since the phylloxera been manufactured in other parts of France, where more rectification is needed to eliminate the undesirable "terroir." There is no evidence to show that in the Cognac region any stills other than the simple pot stills and the modification thereof known as "à premier jet" are used to any extent.

The French Laws and Regulations.

Hennessy, 15245-63, 15435-57

Duty on spirits in France is not as a rule paid by the distiller or merchant, but by the purchaser on the spirits passing the "octroi," the State duty and the octroi duty being paid at the same time. Before the removal of any spirits a permit or "acquit" has to be obtained from the "Régie," *i.e.*, the Excise, and this "acquit" accompanies the spirits and is returned to the "Régie" as a certificate, showing that the spirits have been duly accounted for. The merchant or distiller makes a return annually to the "Régie" giving full particulars of his stock of spirits, and a balance account giving the totals of the transactions; a margin of 7 per cent. is allowed for waste. The "Régie" keep no account of the casks or vats, but on a stock-taking may call for casks given in the merchant's account to check the same. A stock account is kept of the spirits brought into stock and of those sent out.

The French Permit System.

Hennessy, 15245-63, 15270-15308

The "acquit" or permit system is somewhat complicated, but it appears to have two distinct aims, viz.:—

(1) To enable the Revenue officers to control the removal of spirits from place to place, and

(2) To facilitate the identification of spirits with a view to the prevention of misdescription by the dealer or retailer.

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* An account of the phylloxera disease and of the replanting of the vineyards is given in the report of the "Lancet Special Analytical Commission on Brandy," November, 1902.

There are three kinds of "acquits à caution" or permits for spirits, viz.:—

(1) "Acquit blanc" (No. 1) for "eaux-de-vie et alcools naturels" which have been made under the supervision of the "Régie" since 1903. This "acquit" is granted in respect of potable spirits of any variety if exclusively derived from the distillation of wine, and also in respect of spirits exclusively derived from cider, pears, cherries, plums, and other fruits, as well as rum and gin. Attached to this "acquit" is a counterpart which constitutes a certificate of origin; on it is stated the materials from which the spirits were made. This certificate may be detached and sent to the consignee.

(2) "Acquit blanc" (No. 2) used for spirits similar to those covered by the "acquit blanc" No. 1, but made under what is known as the 1872 law, which originated the use of separate "acquits" for different kinds of spirits. When the law of 1903 came into force, holders of stocks of spirits were allowed to declare to the "Régie" the origin of the spirits in stock; spirits for which the declaration of origin has been made and accepted by the authorities are entitled to the "acquit blanc" No. 2. Those who held stocks in 1903 but who did not make the necessary declaration can only send out their spirits under the "acquit rouge."

(3) "Acquit rouge" which is used for all other kinds of spirits, *e.g.*, grain spirit or beet spirit, and includes certain mixtures of spirits, such as cognac mixed with beet spirit.

It will be observed that pure wine spirit can therefore be moved under either "acquit blanc" No. 1 or "acquit blanc" No. 2.

Wine spirit made since 1903 is required, if it is to be entitled to either of the "acquits blancs," to be stored in a separate "chai" or warehouse; it may be mixed with wine spirit made before that date, and then it comes under the "acquit blanc" No. 2. In practice we understand that the requirement of separate warehouses is not enforced, and the spirit made under the 1903 law is allowed to be kept in separate compartments in the same warehouse with wine spirit made before that date.

Spirits not entitled to be removed under either of the "acquits blancs" must be stored in a warehouse separated by a public highway from a store in which spirits entitled to the "acquits blancs" are stored.

Hitherto there has been nothing to show on the "acquit" what is the place of origin of the spirit; thus a mixture of wine spirit made in the Midi, or the Armagnac, or even in Algeria, with wine spirit made in the Charente, would have gone under a white "acquit," either No. 1 or No. 2. Wine spirits of different origins could be stored in the same warehouse, and could be mixed at will by the merchant. The warehouses are not under Revenue lock, and the "Régie" do not keep separate accounts of the different kinds of spirits in the merchant's stock, but only of the total bulk and total alcohol quantities of spirits received and sent out.

With the legal delimitation of the Cognac region, however, it is probable that an additional "acquit" will be instituted, called the "acquit régional," on which the district of origin will be stated, and it is possible that spirits entitled to this "acquit" may be required to be separately stored. Hennessy, 15309-21

Exportation.

Attached to the "acquit blanc" No. 1 there is, as already mentioned, a counterpart in the nature of a certificate of origin, and the particulars stated thereon are the material from which the spirit being removed was made, the number of packages in the consignment, the total bulk quantity in hectolitres, and the total quantity of pure alcohol. This counterpart can be detached and forwarded to the consignee; the particulars of each package, however, are not given nor are the numbers or marks on the packages. The "acquit blanc" No. 2 has no counterpart, but the Douane will, if required, issue a certificate to the effect that the "Régie" have certified as to the materials from which the particular consignment of spirits was made. These

certificates as they stand would not be sufficiently exact for purposes of identification as certificates of origin on importation. No certificate of any kind is issued for spirits removed under the "acquit rouge."

Descriptions and Labels.

Hennessy, 15264, 15332-77, 15420-27.

Fernbach, 15758-70, 15785-91.

By the French law ("sur la répression des fraudes dans la vente des marchandises et des falsifications des denrées alimentaires et des produits agricoles") of 1st August, 1905, as supplemented by the law of 5th August, 1908, and by various administrative decrees, provision is made to prevent spirits being described in a way which is calculated to produce confusion in the mind of the purchaser regarding the nature or origin of the article which he buys. Thus it is illegal for the vendor of eau-de-vie to describe or label a mixture of grain or beet spirit with cognac or other wine spirit as "cognac" or "eau-de-vie de vin." The decree of 3rd September, 1907, for the application of the law of 1st August, 1905, to wines and spirits also made certain provisions for the case where the name of a region constitutes a term designating a product which has an exclusive right to that term, and in conformity with these provisions labels, marks, &c., bearing the word Cognac should signify that the spirit in question is solely the product of the Cognac region. A merchant with a place of business at Cognac who sells a spirit which is not wholly the produce of the Cognac region may legally describe it as eau-de-vie, and add to his label the name of his firm followed by the words "négociants à Cognac" or "commerçants à Cognac" in letters of identical size. In the case of brandies, whether made in Cognac or elsewhere, sold under the names of fictitious firms, as registered trade marks—a not infrequent practice—the fictitious name sometimes appears on the label over the words "marque déposée à Cognac" if the town of Cognac has been the place of registration.

Appendix V.

The exact regional significance of the term Cognac has now been defined by the decree of the present year, to which reference has already been made. Administration of these various decrees in regard to the description and labelling of spirits falls, not primarily on the Régie, but upon an important branch of the Ministry of Agriculture, the "Service de la répression des fraudes," which has been established under the law of August 1st, 1905, and which is assisted in its operations by the information which is afforded by the Régie.

Through the courtesy of the French Government we have obtained copies of the laws and regulations in question, and Mr. Hennessy and others gave us some valuable information on the administrative measures which are in course of development in France for the repression of misleading descriptions of foods. It would appear that the provisions of the French law as regards labelling of spirits apply generally to spirits which are intended for export. It should be added, however, that the term "brandy" as applied in France on labels or casks has no legal significance so far as the French law is concerned.

OTHER BRANDIES.

Southard, 17501-5, 17509, 17524-8

Algerian brandies are said to be of a high quality. They are distilled in Algeria from Algerian wine and sent to France, and an increasing quantity is re-shipped from the Charente to this country.

Appendix C.I.

Gordon, 17369-77, 17402, 17421

According to the Customs' returns, 13,048 gallons of brandy were imported from Spain during the year 1907, but the quantity has been diminishing during the last few years. There are brandy distilleries in many parts of Spain. The material used is said to be only fully fermented wine from fresh grapes; and the stills are of a comparatively simple type, similar to the "à premier jet" stills of the Charente. Mr. Gordon told us that the Spanish brandies were similar in flavour to the French brandies, and that they command a high price.

Southard, 17480, 17484, 17490

The grapes from which Egyptian brandy is made "are grown in Roumelia, "and parts of Greece, Cyprus, and Asia Minor. The grapes are brought in fresh from "the vines into Alexandria, where they are converted into wine . . . and from "wine they are distilled as brandy." The Egyptian brandies apparently possess a very full flavour and are very cheap.

In addition to these brandies there are, we understand, some so-called Egyptian brandies which are not distilled in Egypt, and which, it was suggested, are probably made from currants grown in Greece. Southard, 17497-9.

57,712 gallons of brandy were entered by the Customs as imported from Egypt in 1907. Appendix C, I.

The Customs' Returns also show entries of considerable quantities of brandy from Germany, and small quantities from other foreign countries and British possessions. *ib.*

British Brandy.

British brandy is a compounded spirit prepared by a rectifier or compounder by re-distilling duty-paid spirits, made from grain, with flavouring ingredients, or by adding flavouring materials to such spirits.

The nature of these flavouring materials is regarded as a trade secret which is not disclosed to the Excise officers, and was not disclosed to us; but samples are occasionally sent to the Government Laboratory. Nicholson, 17217. Thorpe, 18164, 18169.

British brandy is often mixed with foreign, generally Cognac, brandy. The price varies from about 2s to 5s. a bottle. It is sold largely for cooking purposes. It is said that it does not compete with Cognac brandy, but with the ordinary French "eau-de-vie," with "Hamburg brandy," and with other imitation brandies. Nicholson, 17223-7. 17173. 17190.

Hamburg Brandy.

"Hamburg brandy" is the name commonly given to a spirit which is stated to be manufactured in Germany from potato or beet spirit, and flavoured so as to imitate grape brandy. Thorpe, 18147-54.

Similar imitation brandies are apparently made in the North of France, in Belgium, and in other foreign countries.

Administrative Action of Board of Customs.

The action taken by the Board of Customs with regard to brandy imported into this country, with a view to the correct assessment of duty, and the enforcement of the Merchandise Marks Act, is fully explained in the Memoranda which will be found at page 244 of the Appendix to Vol. II. of the Minutes of Evidence. Appendix T, I. and II.

Prosecutions.

A number of prosecutions have been instituted under Section 6 of the Sale of Food and Drugs Act, 1875, in relation to the sale of brandy. The first case to which our attention has been called was that of Wilson *v.* Wilson & McPhee which was heard in the Sheriff Court of Lanarkshire at Hamilton in 1903. This, case was treated as a test case, and the Sheriff found the charge proven. The respondents appealed to the High Court on questions of law, but the appeal was dismissed. Wilson, 18298-18309. Wilson, 18335-16.

The following extracts from the Sheriff's judgment indicate the reasons on which his judgment was based:—

> "The only question is, was the liquor which was thus supplied brandy, or to use the words of the statute, was it of the nature, substance, and quality of brandy? If it was, the respondents are not guilty; if it was not, they are. The burden of proving that the liquor is not brandy lies upon the prosecution. They attempt to discharge this burden by establishing two propositions: (1) That brandy is a distillation of wine: (2) that the liquor sold was

not such a distillation—was, in short, not grape spirit, and therefore was not brandy. I think the prosecution have established both propositions.

"As to the first proposition: The witnesses for the prosecution are all agreed that brandy is a grape spirit—a distillation of wine. The skilled witnesses for the defence were both, I think, driven to admit it."

"As to the second proposition, viz., that the liquor in question was not a grape spirit, Dr. Clark testified distinctly that it was not. He got a sample for analysis, and the respondents also got one. He made an analysis, and the respondents admit the correctness of it. Dr. Clark bases his view upon the small proportion of ethers found in the liquor. He says that grape spirit contains at least 45 parts of ethers in 100,000 parts of proof spirit, whereas the sample he analysed contained only 13·25 parts. He adds that the taste and smell showed that foreign spirit (that is, spirit other than grape spirit) was present, probably raw grain or beet spirit. Mr. Gemmell, the respondent's chemist, testified that no chemical analysis will disclose the origin of the spirit present, and that the presence or absence of ethers depends entirely on the method of distillation, and is of no importance. I think that to rely entirely upon the small amount of ethers present would hardly be safe. But the small proportion of ethers is, I think, a very important element in the case."

"If, then, the analysis showed too little of the ether element for grape spirit, and far too much for grain spirit, and if the taste and smell indicated whiskey or grain spirit as much as brandy, I think it is safe to infer that the liquor was not pure grape spirit, but it contained a considerable quantity of foreign spirit as an addition."

Bramall, 16487-16588

In March, 1904, the Islington Borough Council brought nine summonses against various traders in Islington for selling as brandy an article containing varying amounts of spirit not derived from the grape. By arrangement one case was taken as a test case, that against Mr. Hillyer. The summons in this case charged that on the 1st March, 1904, Mr. Hillyer sold a certain article of food, namely alcoholic spirit, which was not of the nature, substance, and quality of the article, namely brandy, demanded by the purchaser, the article so sold containing 60 per cent. of spirit not derived from the grape."

The analysis of Dr. Teed, on which the prosecution was based, stated that "60 per cent. of the spirit present was not derived from the grape. The spirit in "brandy is exclusively derived from the grape."

Dr. Teed gave evidence in support of the prosecution, and said that genuine brandy contained at least 80 parts of ethers per 100,000 parts of absolute alcohol: and that on this basis he found from his analysis that the sample in question contained 60 per cent. of silent spirit.

Counsel for the defence said:—

"That the question was whether brandy in a commercial or popular sense meant a spirit derived from wines only, and that all the dictionaries referred to seemed to agree that while undoubtedly that was the original meaning of the word, and while he should not dispute it, they all agreed that it was then understood to mean a spirit distilled from other sources, but he submitted that it was not necessary to decide that; he would assume for the purposes of his argument that brandy should be a spirit distilled from wine only, but that the evidence in the case as it stood altogether failed to establish the second proposition, namely, that the sample in question was not distilled from wine only. It would be proved that the brandy in question was received direct from Cognac.

"Dr. Teed's evidence was perfectly consistent with the 60 per cent. of which he complained, being derived from wine which had been distilled in a still other than a pot still, because spirit derived from wines distilled in a patent still was indistinguishable from spirit derived from other sources and similarly distilled."

The learned magistrate, Mr. Fordham, came to the conclusion that the spirit sold by the defendant as brandy was not brandy, and that the purchaser was prejudiced and did not get an article of the nature, substance, and quality demanded. In the course of his judgment Mr. Fordham said that there was no standard for brandy, and he must make a standard for himself, which would represent what brandy in this country is in the popular sense, that is, he must find what the public, the ordinary purchaser, understands brandy to be. Reviewing the evidence, he found that what the public understood by brandy was an alcoholic liquid the spirit of which is obtained by the distillation of wine from the grape. Referring to the medical evidence, he said it would seem desirable for the Legislature to fix a standard for brandy defining what brandy is and the proportion of ethers it must contain—perhaps 80 parts in 100,000 of alcohol. Mr. Fordham beyond this statement did not lay down any analytical standard. After the evidence of one of the witnesses for the defence that the spirit in question contained grain spirit, it became unnecessary for him to do so.

Referring to the contention of the defence, Mr. Fordham said that it had been alleged that silent spirit having its origin in grape when blended with spirit distilled from wine was properly brandy, because it had its origin in the grape. He could not accept that statement. He did not think that if a spirit obtained by the distillation of wine had been so highly rectified as to have lost the properties peculiar to the brandy it was still spirit of wine so as to fulfil the definition of brandy. However, it was not necessary for him so to rule in that case, as it had been admitted that there was grain spirit in the brandy purchased and supplied to the defendant.

On the 18th April, 1905, the Kensington Borough Council summoned a Mr. Pryor for selling, to the prejudice of the purchaser, brandy which was not of the nature, &c., of the article demanded, as it contained at least 58 per cent. of spirit not derived from the grape. The summons was heard before justices at Kensington on the 16th May, 1905, and the defendant was fined £5 including costs. He appealed to Quarter Sessions. The appeal was heard on the 7th July, 1905, when it was dismissed with costs. Bramall, 16577-8, 16589-95.

Similar convictions have been obtained in various other parts of the country. Cassal, 18249, 18276.

The Ether Standard.

It will be seen that, in two of the cases to which we have just referred, the analysts who gave evidence in support of the prosecution postulated a certain proportion of ethers as a standard of genuine brandy; and in the Islington case the learned magistrate suggested that it might be desirable that the Legislature should fix a standard for brandy, and that the standard might perhaps be 80 parts of ethers per 100,000 parts of absolute alcohol. As a result, apparently, of this suggestion, the "ether standard," as it has been called, has been largely adopted by public analysts, while the trade have generally acted upon the assumption that any infringement of this standard might lead to prosecution and conviction under the Sale of Food and Drugs Act.

The immediate consequence of the adoption of this standard appears to have been, to a certain extent at least, beneficial, in that it established a simple means of checking the sale as brandy of certain classes of spirits which consisted either of neutral spirits artificially flavoured to simulate true brandy, or of mixtures of genuine brandy with large proportions of other spirits not of the recognised character or origin of brandy. Schidrowitz, 15962.

It must be apparent, however, that a standard based on a minimum quantity of ethers alone is quite incapable of affording general protection against fraud. For instance, genuine brandies are frequently found to contain upwards of 100 parts of "ethers" per 100,000 parts of alcohol; admixtures of such with neutral spirits, in which the latter might be present even to the extent of 20 per cent., would be passed as genuine brandies by the standard.

Again, it has been represented to us that the proportion of "ethers" required by this standard can be ensured without difficulty in any spirit, genuine or otherwise, by the artificial addition of suitable "ethers." Trade circulars advertising for sale essences specially prepared for this purpose have been submitted to us; the inference to be drawn from them is obvious, and there can, we think, be little doubt that the belief, which very generally obtains, that spirits are now being sold to the public as genuine brandy, the proportion of "ethers" in which has been artificially adjusted by the aid of such essences, is well founded. Schidrowitz, 4124, 4264.

It need scarcely be argued that in the face of such possible practices, the ether standard can no longer be regarded as effectual for the control of the sale of brandies in the interests of the public or of fair trading. On the other hand the standard may be actually mischievous, inasmuch as the effect of its operation may be to mask the fact that a fictitious or adulterated brandy with the required proportion of "ethers" is being misdescribed and sold as a genuine brandy.

Fernbach, 15805–6. It should further be observed that this standard has not been recommended or adopted in France. On the contrary, Dr. Fernbach, the Principal of the Fermentation Department of the Pasteur Institute, Paris, showed by reference to analyses of genuine Cognac brandies of undoubted origin that the proportion of ethers in such brandies is sometimes below the minimum limit fixed by the standard. Similar instances have been given by other witnesses; and it has been pointed out to us that the late Dr. Bell, in the evidence which he gave before the Select Committee of the House of Commons, 1891, recorded an analysis of genuine brandy which contained only 61·9 parts of "ethers" per 100,000 of alcohol.

Hennessy, 15480.

In order to form a reliable opinion as to the genuineness or otherwise of a sample of reputed brandy, it is necessary, in the opinion of Dr. Fernbach, to take into consideration all the usual analytical data, and, in addition, the character of the spirit as regards flavour, and any further information obtainable from the Excise records as to the origin of the sample.

Vasey, 17606–9. Cassal, 18226. From the evidence which we received there can be little doubt that British chemists are generally in accord with the opinion expressed by Dr. Fernbach as to the disadvantage of relying upon a single analytical figure unsupported by other evidence.

Conclusions.

The evidence is strongly in favour of regarding brandy as a spirit derived from no other materials than the grape. "The essential point about brandy," Thorpe, 18038. according to Dr. Thorpe, "is that it is a grape juice alcohol in contradistinction to whiskey, which is a cereal-produced alcohol." This view of the nature of brandy appears to have been generally adopted by magistrates in deciding cases brought before them under the Sale of Food and Drugs Act; it is in consonance with the provisions of the French laws which make a clear distinction between eau-de-vie de vin and other spirits; it is recognised by the majority of traders in this country; and it is, we believe, in accord with the idea that is present to the mind of the consumer when he asks for brandy.

Thorpe, 18038. Dr. Thorpe defined brandy as "spirit distilled from fermented grape juice or 'must' of grapes."

Schidrowitz, 15870. Dr. Schidrowitz thought that the word "brandy" in the United Kingdom means "spirit obtained by the distillation of fermented wine made from fresh grapes."

Veley, 16258. Dr. Veley defined brandy as "a potable spirit prepared by the fractional distillation of wine only."

The only witnesses who controverted this view of the materials which may properly be used in the manufacture of the spirit to which the term "brandy" is applied as a trade description were the manufacturers of "British brandy."

Nicholson, 17190, 17196–8. Currie, 17307. Mr. Nicholson claimed that British brandy was a variety of brandy and that it could be sold without the qualification "British," and in support of this contention he referred to the old Statutes quoted above.

But it appears to us that, although in the old Statutes the word "brandy" is used as a general term signifying merely a potable spirit, and really synonymous with the term "aqua vitæ," at the present time the word "brandy" has become associated in the mind of the consumer and by the custom of the trade generally with a particular class of spirits, viz., spirits derived from the grape.

Our conclusion therefore is that the term "brandy" is applicable to a potable spirit manufactured from fermented grape juice and from no other materials.

But we are of opinion that the compounded spirit mentioned above and long recognised by the name of British brandy is entitled still to be so named and sold as "British brandy."

With regard to the processes which may be used in the manufacture of brandy, we have already indicated that, while in the Cognac region either the simple pot-still or the modified apparatus known as "à premier jet" is in general use, in other parts of France more complicated types of stills are employed, and that the selection of a particular type of still is in the main governed by the character of the wine which is to be distilled. The French law accordingly, which so carefully differentiates the raw materials, makes no distinction between the different types of stills. For this reason, even if it were desirable, it would hardly be practicable, in the case of the brandy which is imported from France and which forms so large a proportion of the total quantity of brandy which comes into this country, to restrict the application of the term to spirit distilled in any particular type of still.

It has been suggested that a wine spirit may be so highly rectified as to become a neutral, flavourless spirit, without any of the characteristics which are ordinarily associated with brandy, and that this highly rectified spirit may be then flavoured with essences, and sold as brandy.

While admitting the possibility of highly rectified wine spirit, flavoured with essences, being sold as brandy, we doubt whether the practice is sufficiently common to warrant any attempt being made to limit the extent of rectification which may be permitted. But, even if it were so, we consider that it would be very difficult to enforce such a limitation, and we observe that no attempt has been made to do this under the French law. Schidrowitz, 15900.

Our conclusion therefore is that the determination of the application of the term "brandy" in this country cannot be controlled by the nature of the apparatus or process used in the distillation of the spirit.

RUM.

The term "Rum" has long been recognised as applicable to potable spirits manufactured from various products of the sugar-cane.

British Guiana and the British West Indian Islands are the principal sources of the imports of rum into the United Kingdom, smaller quantities coming from the French West Indies, Dutch Guiana, and other countries. Appendix C, II.

Jamaica Rum.

The Board of Customs have directed that rums imported from Jamaica, or admitted as being of Jamaican origin, are to be entered in the accounts and on all relative documents, including permits, as "Rum from Jamaica," and that care is to be taken that this description is not applied to rum from Jamaica which has been blended with rum of other origin. Appendix T, I.

Mr. Nolan gave the following account of the manufacture of Jamaica rum:— Nolan, 12552.

> "Jamaica rum is made from sugar cane in the old pot still. The sugar canes, when ripe, are cut and carted into the works (the canes ripen in from 12 to 15 months). They are passed through a strong steel or iron three or five roll mill worked by steam. The juice of cane liquor falls through the rolls on to a receptacle directly under the mill, which is called the mill-bed. The liquor is carried from the mill-bed by gravitation to another receptacle which is called the well. From this well it is pumped to large iron vessels called syphons or clarifiers, which contain from six to seven hundred gallons. In the bottom of the syphons there are copper steam coils or tubes, which are filled with steam when the syphon is full. The liquor is thus heated to a few degrees below boiling point. By this means all the scum comes to the top, and the rest of the liquor in the syphon is partially clarified. The clarified liquor is then gradually drawn off by a cock at the side of the syphon low down, till the scum alone is left. The clarified liquor is either sent to the boiling-house to make sugar or passed through other vessels to clarify to a higher degree, as really the whole process of sugar-boiling is to eliminate foreign matters (which take the form of scum) from the liquor, and then remove the water by evaporation. The scum or dirty liquor which remains in the syphon is then drawn off and sent to the still-house, where it is allowed to remain for a few days till it sours. The syphons

are also washed out with water, and such water is sent to the same receptacle in the still-house. In fact, all the washings and scums from vessels in the boiling-house are sent to this receptacle. There is also put into this receptacle at the beginning of crop a certain amount of megass which assists to sour the liquor. Megass is the fibrous part of the cane which remains after crushing the juice from the cane in the mill. In the meantime the clarified liquor in the boiling-house is made into sugar and allowed to cool. It is then passed through centrifugals or purgers which separate the molasses from the dry sugar on something on the same principle as a milk separator. The molasses are then rich, and at this point are sent to the still-house. * * * The only other ingredient used in the manufacture of Jamaica rum is dunder. This is a substance which remains at the bottom of the pot still after all the spirits and a great quantity of the water have been evaporated by distillation from the wash. It is removed from the still and allowed to cool for a few days. It comes from the still something like the colour and consistency of pea soup. There are three ingredients with water used in the setting up of the wash for fermentation, all of which are the produce of sugar cane, viz., scum or skimmings, molasses, and dunder. They are used in proportions according to the judgment and practical experience of the distiller, who is guided by all circumstances connected with the estate and distillery. The fermentation is from six to twelve days, in some cases longer. After the fermentation subsides the wash is pumped into a pot still. * * * * Jamaica has at all times used the pot still. There is no other used in the Island."

Appendix L. Two reports by the Hon. H. H. Cousins, Government Analytical and Agricultural Chemist, Jamaica, which are printed in the Appendix to Volume II. of the Minutes of Evidence, may be specially referred to for further information on this subject.

According to Mr. Cousins, there appear to be three different types of Jamaica rum:—

(1) Rums for consumption in Jamaica or "local trade quality."
(2) Rums for consumption in the United Kingdom or "home trade quality."
(3) Rums for consumption on the Continent or "export trade quality."

Each of these grades of rum is said to meet the requirements of a special market, and to be judged by a different standard of quality.

Mr. Nolan was inclined to divide Jamaica rum into two classes only, treating the local trade quality as practically the same as the home trade quality for consumption in the United Kingdom; and Sir Daniel Morris said that no doubt Mr. Cousins divided these two for the sake of bringing the facts more clearly before the general public.

Morris, 13665
Nolan, 12721
Trotter, 13880

Morris, 13670-1. During our inquiry our attention was called to a book entitled "Le Rhum et sa Fabrication," written by Monsr. E. A. Pairault and published in Paris in 1903, which contained some extraordinary statements with regard to Jamaica Rum; and, as the author of this work was stated to have been sent on a scientific mission to the Antilles by the French Minister for the Colonies, it seemed desirable that the Jamaica Government should be given an opportunity of refuting the allegations made therein.

Sir Daniel Morris, the Imperial Commissioner of Agriculture for the West Indies, when giving evidence before us, at once took exception to the statements referred to, and offered to obtain evidence entirely refuting them. The matter was referred to Mr. Cousins, who drew up a Memorandum controverting Monsr. Pairault's charges.

Appendix M. II. In our opinion this Memorandum, a copy of which is printed in the Volume of Appendices (Vol. II., Appendix M II.), may be regarded as a complete answer to these allegations. It should be added that, in reply to an unofficial representation addressed to the French Minister of Foreign Affairs, Your Majesty's Ambassador at Paris received a Memorandum stating that no trace could be found of any official mission having been entrusted to Monsr. Pairault.

Appendix M. III.

Demerara Rum.

Appendix M. I. The following account of Demerara rum, as manufactured in British Guiana, is extracted from a statement drawn up by the British Guiana Planters' Association and transmitted to the Commission by the Colonial Office:—

"In British Guiana the wash (wort) is prepared by diluting molasses with water to a density of 1,060, and it is rendered slightly acid by the addition of sulphuric acid in quantity sufficient to set free more or less of the combined organic acids, but so as not to have

uncombined sulphuric acid present in the wash; whilst in some of the distilleries additions of sulphate of ammonia in small proportions are made to the wash, in order to supply readily available nitrogenous food for the yeasts and to thus enable them to multiply with rapidity, and to retain a healthy active condition. The reason for rendering the wash slightly acid is to guard against the excessive propagation of the butyric and lactic organisms, and to render it more suitable for active alcoholic fermentation. Within a very short time from the molasses being diluted it enters into vigorous fermentation, and the fermentation rapidly proceeds to more or less complete attenuation.

* * * * *

In British Guiana the distilleries are of three kinds:—

1. Those using pot stills, or vat stills which are practically only modified pot stills.
2. Those using both pot stills or vat stills and Coffey or other continuous rectifying stills.
3. Those using only Coffey or other continuous rectifying stills.

* * * * *

There were forty-four distilleries at work in 1905-6, forty-three in 1906-7, whilst forty-two are at present operative. Thirty-two distilleries use pot or vat stills only, three have both pot or vat stills and continuous stills, whilst seven possess continuous stills only.

Vat stills consist of cylindrical wooden vessels built of staves strongly hooped with wrought iron. They have high copper domes covering openings in the heads of the vessels which communicate with a retort or retorts of the Jamaican pattern, but, as a rule, the retort acts as the lowest vessel of a rectifying column. As in Winter's still a spiral pipe or a series of small perpendicular pipes descend down the interior of the column through which cold water is run whenever distillation is in progress, and by which the spirit vapour undergoes a process of rectification as it ascends the column before passing into the condenser. The vat stills are heated by injection of steam.

The Coffey or continuous rectifying stills used are of well-known types.

Imitation Rum.

It appears that for some years past a cheaper imitation of rum has been made on the Continent, principally in Germany, and we learn from the Board of Customs that prior to 1891 repeated complaints were made by rum importers that "Hamburg Imitation Rum" was being imported as "Rum" and blended with genuine sugar-cane rum in bond. This matter came before the Select Committee on British and Foreign Spirits of 1890-91, who recommended that facilities should not be afforded by the Customs for mixing colonial rum and imitation rum in bond, and that rum should be entered under that name only when it comes from cane-growing countries. Appendix T. 1.

In consequence of this recommendation, the Treasury directed that in the Official Import List rum should be shown under two heads, viz.:—

Rum (imported from ports in sugar-cane producing countries).
Imitation Rum (imported from ports in countries in which the sugar-cane is not produced).

A Customs general order was accordingly issued, on the 8th September, 1891, directing that entries as "Rum" are not to be accepted for spirits coming from ports in countries in which the sugar-cane is not grown, unless satisfactory evidence of its manufacture in a cane-growing country is produced in the shape of the bill of lading from the original port of shipment and certificates of landing at, and exportation from, the port of transhipment or exchange.

Spirits imported and entered as "Rum" from the West Indian Islands, Mauritius, Brazil and other countries in which the sugar-cane is cultivated, are, subject to examination, ordinarily accepted as rum; but spirits imported from other countries and alleged to be rum would not be admissible otherwise than as "Imitation Rum" in the absence of the prescribed evidence of production in a cane-growing country.

Imitation rum may not be blended or mixed in bond with "Rum" for home consumption. Rum or imitation rum and other foreign spirits may, however, be mixed for exportation, but the word "mixed" must be marked on one head of each cask containing the mixed liquids.

The quantity of spirit imported under the name of imitation rum and cleared for home consumption is relatively insignificant, and has shown a downward tendency in recent years. In 1906-7 it amounted only to 12,208 gallons, and the largest quantity in any year during the past ten years was 44,080 gallons in 1899-1900.

Conclusions.

Man, 13015. Tinne, 13792. Appendix M, I.

It has been suggested that the principal cause for the difference in flavour between rums produced in various places lies in the methods of fermentation used, rather than the processes of distillation. According to the evidence there are two distinct types of rum, Jamaica rum being representative of the first and Demerara rum of the second. The first type is the result of slow fermentation, lasting from 10 to 12 days, of wash set at a relatively high density; the second is the result of a rapid fermentation, lasting from 36 to 48 hours, of wash set at a low density.

Aspinall. 13402.

We see no reason, however, to deny the name of rum to either of these types. We consider that the definition of rum as "a spirit distilled direct from sugar-cane products in sugar-cane growing countries," which was submitted to us by Mr. Aspinall on behalf of the West India Committee, fairly represents the nature of the spirit which a purchaser would expect to obtain when he asks for "rum." The Customs already recognise the distinction between "rum," "rum from Jamaica," and "imitation rum," and we consider that this differentiation should be continued.

GENEVA.

Clark, 13060-61, 13142, 13149. Appendix T, I.

Geneva, also called "Hollands," "Hollands Geneva," or "Hollands Gin," is a foreign enumerated spirit imported into this country from Holland. The name "Geneva" is probably derived from the Dutch word "jenever," meaning juniper.

Clark, 13063

Although distinct in flavour, the spirit is similar in many respects to English Gin, inasmuch as in both cases the genuine article is made from grain only and flavoured with juniper.

Clark, 13065. Jansen, 14239-41. Dunlop, 14595.

Geneva is now made from a mixed mash of malted barley, rye, and maize in more or less equal proportions. The whole mash is fermented together and is then distilled three times in a pot still, the result being a spirit called moutwijn or maltwine. The moutwijn is then redistilled, and juniper berries and other flavourings added.

Clark, 13083.

The Geneva manufacturers do not make the moutwijn themselves, this spirit being made, in Schiedam in the main, in small pot stills and bought through brokers.

Clark, 13091-2.

Jansen, 14242, 14260-75, 14314.

It would appear that a practice has grown up of selling under the name of Geneva a spurious spirit produced by a mixture of molasses spirit with a little Schiedam moutwijn. Some attempt was made by the Municipality of Schiedam to institute a form of control by which genuine Hollands Geneva could be guaranteed, but the system does not appear to have met with much success.

GIN.

Several definitions of gin, all agreeing in substance, were submitted to us.

Burnett, 13165. Kelly, 13239.

Mr. Burnett defined gin as a potable spirit produced by distillation from grain and flavoured with juniper and other herbs. Mr. Kelly defined it as a spirit distilled from grain doubly rectified and then flavoured by distillation with juniper berries and other herbs.

Boord, 13317.

Sir William Boord gave a more elaborate definition of gin as—

> "A potable spirit—sweetened or unsweetened—distilled only by those who hold a rectifier's licence and use the necessary stills and plant under the control of the Excise for the purpose. It is made of spirit specially rectified and re-distilled with juniper berries and other flavouring herbs."

With regard to the materials used in the manufacture of gin, all the witnesses were agreed that it should be made from cereals; maize, malt, and rye appear to be the main materials used for the original production of the spirit, while juniper berries are regarded as essential for the subsequent flavouring. Other flavouring herbs are used, but these vary according to the practice of individual rectifiers. As a general rule the manufacturer of gin is a rectifier only, and buys the spirit which he uses for rectification from a distiller. This spirit in the United Kingdom is produced at patent still distilleries entirely, and the London gin makers use London spirit for this purpose very largely. Burnett, 13166. Kelly, 13240. Currie, 13603.

All the witnesses who appeared before us objected to the use of molasses for the preparation of the spirit from which gin is made. They base their objection on two main grounds. In the first place they contend that gin is essentially a British spirit and a grain spirit; that the consumer expects and pays for a grain spirit; and that it is unfair competition to use other articles in the manufacture of this spirit without declaring the use of such other materials. Secondly, they urge that molasses spirit is a coarse spirit unsuitable for the production of gin; that there is an objectionable flavour arising from molasses spirit; that the rectifier does not require a pure alcohol in the sense of being chemically pure, what they need being a clean spirit with a slight grain flavouring, the rectification of which has been arrested at a particular point which experience has shown to be desirable. Burnett, 13169, 13203-6. Kelly, 13242. Nicholson, 13303. Boord, 13327. Hawker, 13980.

With regard to the process of manufacture, we have not been able to obtain from the Excise authorities full and detailed information such as they gave us in the case of whiskey, the reason being that gin is not produced under close Excise supervision, but is manufactured out of bond from duty-paid spirit. We gather that the original spirit, as above stated, is in the United Kingdom invariably made in the patent still, and that this spirit is then rectified and the juniper and other flavouring materials added. The actual practice of different manufacturers seems to vary considerably; the spirit is often doubly rectified, and in the opinion of most of the witnesses the rectified spirit should be actually distilled with the juniper berries and the other flavouring materials, the distillation in that case taking place in a kind of pot still with a long rectifying head. In some cases it would appear that the flavouring materials are separately distilled and added to the alcohol afterwards.

Objection was taken to a practice, concerning which we were unable to obtain any direct evidence, but which was frequently referred to, of selling as gin an ordinary patent still spirit flavoured with essences and not subjected to subsequent rectification. It was suggested that such a product was often exported under the name of gin and sold at a much lower price than the genuine article. Burnett, 13211. Currie, 13610.

LIQUEURS, Etc.

Liqueurs are not defined by statute, but they are described in the Warehouse Regulations issued for the guidance of Revenue officers as "compounded spirits, the ingredients in which interfere with the correct action of the hydrometer. British liqueurs may be deemed to include all sweetened or otherwise *'obscured' British compounds, including essences and perfumed spirits, of which the true strength cannot be ascertained without distillation."

"Sweetened spirits" are similarly described as spirits "to which any matter "has been added after distillation, which imparts to it the quality of sweetness and "produces *obscuration to the amount of over ·6 per cent."

As a rule the name "liqueur" is applied to foreign products of the above nature, while the British articles are usually called "cordials." Currie, 13632, Garrett, 14665.

* Obscuration is the term applied to the effect produced by matter in solution in reducing the apparent alcoholic strength of a liquid as determined from its specific gravity.

At the present time there are no restrictions as to the materials or processes used in the manufacture of either foreign or British liqueurs, and no declarations are required as to the materials, processes of manufacture or preparation, or age of such spirits.

Henderson, 14335. Most liqueurs and bitters are proprietary articles, and it was represented to us that to compel the proprietors to disclose the secrets of manufacture and the proportions of the constituents would be a great injustice to them and could be of no possible benefit to the consumer.

ib. The witnesses who gave evidence on this branch of the subject were virtually unanimous in the opinion that it would be undesirable to require any such declarations or to impose any restrictions as to the materials or processes of manufacture, provided that the spirits in question contained no ingredients injurious to health.

The exact method of preparation of the various liqueurs is, as we have pointed out, a jealously guarded trade secret, but generally it may be said that liqueurs Moltzer, 14884. are made by infusion, by distillation, or by the use of essences. Some compounds, such as Cherry Brandy and Peach Bitters, are made by infusion; they cannot be obtained by distillation. Others, such as Curaçoa and Anisette, can only be obtained Moltzer, 14885 by distillation. Crême de Menthe is made by an essence prepared from the leaves and top of the plant Mentha Piperita. The use of chemical essences, however, is said to be undesirable.

Henderson, 14347. Liqueurs and bitters have no defined alcoholic strength: the alcohol is merely a solvent for the flavouring essences.

Henderson, 14351. Liqueurs of the best quality are generally made with old spirit, but new spirit is probably used for the manufacture of the cheaper articles.

Some foreign countries have placed restrictions upon the sale of certain liqueurs owing to the toxic character of the materials used in their manufacture. The sale of absinthe, for example, has been entirely prohibited in Switzerland, and in France it can only be sold at a high alcoholic strength with a correspondingly small Thorpe, 18192-3. proportion of wormwood extract. The quantity of absinthe consumed in this country is very small.

UNENUMERATED SPIRITS.

Appendix T, I. Brandy, rum, imitation rum, and Geneva, are classified for the purposes of the Customs tariff as enumerated spirits. All other imported spirits are classified as unenumerated spirits, which may be either sweetened or unsweetened.

The potable unsweetened unenumerated spirits which are imported into this country consist mainly of plain spirits produced in Germany from potatoes: the other varieties include vodka, arrack, kirschwasser, rye whiskey, and Canadian Club whiskey.

There has been a remarkable diminution during the last few years in the quantity of foreign plain spirits imported into the United Kingdom both from Germany and from other countries. In 1902 the total quantity was 3,184,729 proof gallons, of which 3,089,909 came from Germany. In 1907 the total was only 465,595 proof gallons, of which 429,439 was imported from Germany. These spirits are used largely for industrial purposes. A small quantity may at times be used for blending with Thorpe 17908. whiskey and other spirits; but we received no evidence to show that this is a frequent Grecnlees, 6524. practice, and it must be remembered that these foreign spirits are not allowed to be mixed with British spirits in bond except for exportation.

Sweetened unenumerated spirits include some of the foreign liqueurs referred to above.

CONCLUSIONS AS TO COMPOUNDED SPIRITS.

We have been unable to recommend any restrictions upon the numerous materials used in the preparation of gin, Geneva, and other compounded spirits which are known to the British trade, or upon the processes which are employed in their manufacture. In the absence of information as to the nature of the materials employed we can express no opinion on the wholesomeness or otherwise of particular compounds, but we received no evidence that any spirits of this nature (with the exception of absinthe) have a specially toxic action.

Gilbey, 13540-3. Moltzer, 14963-9

COMPULSORY BONDING.

The Select Committee of 1890-91 came to the conclusion, from the evidence submitted to them, that "compulsory bonding of all spirits for a certain period is unnecessary and would harass trade." They stated that as whiskey "undoubtedly improves by age, all the witnesses were asked whether there would be any hardship in enacting that whiskey should be kept compulsorily in bond for a given period," and that "the testimony was practically unanimous that compulsory bonding would harass trade, and was altogether unnecessary. This opinion was given by experts from England, Scotland and Ireland."

e.g. Jameson, 1554, 1565. Power, 1830. Gilbey, 2038. Pheysey, 2765. Calder, 5366. Greenlees, 6509. Walker, 7102. Usher, 7813. Mackenzie, 9067. Grant, 9183.

A number of the representatives of the whiskey trade who gave evidence before us, on the other hand, were in favour of compulsory bonding.

This partial change of opinion may possibly be accounted for by the fact that, as regards the whiskey trade generally, and certain sections of it in particular, both the stock of whiskey and the warehouse accommodation are now greater than in 1890-91.

Virtue, 4911-3.

In spite of this fact, however, it seems clear that a system of compulsory bonding would necessitate additional warehouse accommodation, and that the provision of such accommodation would throw considerable expense upon some of the pot still distillers and the majority of the patent still distillers.

In our opinion, the compulsory bonding of spirits for a prescribed length of time could only be justified if it were established that such a restriction of trade is necessary in the interest of public health.

Most witnesses were of opinion that old whiskey was less deleterious to health than new whiskey, and that this difference was more especially marked in the pot still product. But it was not established before us that any material change in the toxicity of whiskey is effected by age. It is, however, generally agreed that with age a great improvement in the flavour of whiskey is developed.

It was represented to us by some distillers that pot still whiskeys acquire a coarse pungent flavour shortly after manufacture, and that they do not lose such unpleasant taste until they have been kept in wood for about three years. In consequence of this, very little of this class of whiskey, it is stated, is put on the market under three years old. Furthermore it appears that pot still whiskeys are regarded in the trade as still young at this age, and that it is advisable to store them in wood for additional periods, varying from two to nine years, according to their character, to allow them to become fully matured.

Jameson, 1564. Power, 1830. Walker, 7101, 7211. Cowie, 8756-64.

It was also stated that new patent still whiskey is not injurious to health, and that less change in its flavour is developed in the course of ageing than in the case of pot-still whiskey. Patent still whiskeys mature more rapidly, and many of them pass into consumption when only a few months old. Some, however, are kept from two to ten years in wood.

Martell, 15118,15137 Fernbach, 15819. Morris, 13715. Clark, 13074. Burnett, 13179. Boord, 13330. Gilbey, 13490,13536 Currie, 13612.

The evidence with regard to the desirability, in the interest of public health, of enforcing a minimum period during which other spirits should be required to be kept in bond before passing into consumption was even less conclusive than in the case of whiskey. While brandy and rum undoubtedly improve in quality by ageing, there is abundant evidence to show that they are not unwholesome spirits when quite new. Again, it was very generally insisted that gin is ready for drinking at once, and does not improve either in flavour or in wholesomeness by age. Similarly with regard to liqueurs the evidence was generally to the effect that they are in no way rendered more wholesome by age.

In our opinion the evidence is not sufficiently positive to justify us in holding that it is necessary for the protection of the public health to detain any spirits for a minimum period in bond. We may add that, apart from the fact that the price of spirits would have to be raised in order to cover the loss of interest consequent upon their detention in bond, the practical difficulties involved in any system of compulsory bonding would, in any case, make us hesitate to recommend such a restriction.

In the first place, new spirits are suitable for making into British gin and compounds, liqueurs, tinctures, and medicinal spirits, and to prevent the delivery of any spirits for potable purposes under a fixed limit of age would be unfair to manufacturers of these articles, and would interfere with the export trade by increasing prices. On the other hand, to treat the manufacturers of these articles exceptionally and allow them to receive spirits irrespective of age, would be objectionable, as most of them would be in a position to use the spirits for blending with whiskey.

Secondly, special difficulty would arise in dealing with foreign spirits, such as brandy and rum.

If compulsory bonding is considered as a means of securing the maturity and flavour, as distinct from the wholesomeness, of spirits, it must be borne in mind that spirits of different character do not mature with equal rapidity. A very much longer period is required for the maturation of a heavy pot still malt whiskey, for example, than for a light patent still whiskey. Even in the case of spirits of the same character differences in the conditions of storage, such as the nature and size of the vessel in which the spirit is kept, the relative humidity of the place in which it is stored, and climatic conditions generally have a considerable effect in determining the rapidity of maturation. Whatever period might be fixed would inevitably be open to one of two objections; it would either impose an unnecessary burden on particular classes of spirits, or it would be too short for the maturing of other classes. The particular period most usually suggested, namely, two years, would, in our opinion, be open to both objections.

Dewar, 10932-43, 10967-77.

Haig, 11851, 11876-79.

For the above reasons we have come to the conclusion that it is not desirable to require a minimum period during which spirits should be matured in bond.

LABELLING IN BOND.

Appendix T, III.

It was made the subject of complaint before us that labels containing mis-descriptions or misleading statements are allowed to be affixed to whiskey bottled in bond and various instances of such mis-descriptions were supplied to us. On this subject the Revenue Authorities have furnished us with full information.

On the general question they submitted to us a memorandum which will be found at page 246 of the Appendix to Volume II. of the Minutes of Evidence, explaining what in their view are the powers and duties of a Revenue Board, and defining their policy and practice. They also placed at our disposal an Officer, specially selected from their Service as being acquainted with every detail of the practice in bond and familiar with all the Departmental records on the subject, with instructions to furnish all information, written and oral, both on the general question and on the

specific instances, which we might desire. We have availed ourselves freely and beneficially of his services.

Put shortly, the position of the Revenue Authorities is that they cannot properly be asked to accept responsibility for the accuracy of all labels affixed in bond. Any attempt to do so would, in their opinion, "inevitably introduce friction and "difficulty not only into the daily intercourse between the individual trader and the "individual Revenue Officer but also into the relations between the Board and the general "body of traders," with the result that the efficiency of the Department in discharging its primary duty of collecting the Revenue would be impaired. All the Department can do is to object to labels which from information in the knowledge of the Revenue Officer are known to be false. This position was accepted by the Select Committee of 1890-1, and we see no reason to differ from their conclusion.

The practical difficulty in dealing with this matter is that while there are cases of suspected mis-description, such cases can seldom be proved, owing to the absence at present of authoritative definitions of the different kinds of whiskey. This clearly appeared when we inquired into the specific cases of mis-description brought to our notice. For instance, not only is there no legal definition of "Irish Whiskey" or "Scotch Whiskey," but hitherto expert opinion has been widely divided as to what the definition should be, and consequently the Revenue Authorities have no sanction of law or custom by reference to which they could prohibit the use of these descriptions on labels. We recognise the force of this contention, but we hope that the opinions expressed by us in this Report as to what should be the definitions of "Whiskey," "Irish Whiskey," and "Scotch Whiskey," will lead to many labels which have hitherto only been regarded as misleading and of doubtful accuracy being classed as definite mis-descriptions.

With regard to spirits, other than whiskey, which are bottled in bond, no representations were made to us sufficiently important to be referred to.

THE APPLICATION OF THE MERCHANDISE MARKS ACTS AND THE SALE OF FOOD AND DRUGS ACTS TO OFFENCES CONNECTED WITH POTABLE SPIRITS.

Merchandise Marks Acts.

Under the Merchandise Marks Acts it is an offence to sell, or expose or have in possession for sale or any purpose of trade or manufacture, goods to which a false trade description is applied, and a person who sells such goods, and does not prove that he acted innocently in the matter, is liable to penalty. The expression "trade description" includes any description, statement, or other indication, direct or indirect, as to the place or country in which any goods were made or produced, as to the mode of manufacturing or producing any goods, and as to the material of which any goods are composed. The use of any figure, word, or mark which according to the custom of the trade is commonly taken to be an indication of the nature of the goods in the above sense is deemed to be a trade description within the meaning of the Act. A false trade description means a trade description which is false in a material respect as regards the goods to which it is applied. A person is deemed to apply a trade description to goods who applies it to the goods themselves or to any covering, label, or other thing in or with which the goods are sold or exposed for sale, trade or manufacture, or who places the goods within any covering to which a trade description has been applied. The expression "covering" includes stopper, cask, bottle, vessel, box, cover, capsule, case, frame, or wrapper, and the expression "label" includes any band or ticket.

In a prosecution under these Acts the evidence that may be given in support of it is uncontrolled by statutory provisions, whilst under the Sale of Food and Drugs Bramall, 16630.

Acts the duty of giving a certificate of an analyst is imposed, and such certificate being given is a condition precedent to a prosecution and is receivable in evidence.

In the case of spirits sold under false labels or invoices, the Merchandise Marks Acts may be considered ordinarily to afford a sufficient remedy to the trader who is prepared to utilise them, provided that the true significance of the trade description in question can be established. The evidence given before us shows that the makers of "proprietary" spirits, such as well-known brands of bottled brandies and whiskeys, are frequently prejudiced by the sale of other spirits in bottles bearing false labels. In some cases the proprietors have successfully taken action against the offenders under these Acts. Proprietary spirits of a standard flavour are, as a rule, of very constant composition, and there would usually be little difficulty in establishing the offence by expert tasting and chemical analysis. In practice, however, there appears to be considerable reluctance on the part of firms who are damaged by the malpractice in question to utilise the Merchandise Marks Acts for their protection. It is possible that the loss which they incur is considered a lesser evil than the trade hostility which energetic application of these Acts might provoke. This consideration is obviously important in regard to the false use of a term which merely implies that a spirit belongs to a particular type or class. Here it is not the standard product of a particular firm that is in question, but one among many products which may vary considerably among themselves. Associations interested in the maintenance of the purity of "Cognac" have recently employed these Acts for the protection of their product, but it does not appear that any similar action has been taken to prevent misdescription of whiskey. This absence of prosecutions has probably to a large extent resulted from the uncertainty as to trade descriptions of whiskey which has prevailed hitherto.

Bramall, 16620-30.

The local authorities appear to have no legal power to incur expense in enforcing the provisions of the Merchandise Marks Acts. It has been suggested to us that it would be desirable if local authorities were in a position to apply the procedure of these Acts to misdescription of foods generally, and so to spirits, and we agree with this suggestion.

Sale of Food and Drugs Acts.

Section 6 of the Sale of Food and Drugs Act, 1875, is as follows:—

> "No person shall sell to the prejudice of the purchaser any article of food or any drug which is not of the nature, substance, and quality of the article demanded by such purchaser, under a penalty not exceeding twenty pounds: Provided that an offence shall not be deemed to be committed under this section in the following cases; that is to say—
>
> "(1) Where any matter or ingredient not injurious to health has been added to the food or drug because the same is required for the production or preparation thereof as an article of commerce, in a state fit for carriage or consumption, and not fraudulently to increase the bulk, weight, or measure of the food or drug, or conceal the inferior quality thereof;
>
> "(2) Where the drug or food is a proprietary medicine, or is the subject of a patent in force, and is supplied in the state required by the specification of the patent;
>
> "(3) Where the food or drug is compounded as in this Act mentioned;
>
> "(4) Where the food or drug is unavoidably mixed with some extraneous matter in the process of collection or preparation."

At first sight it would appear that the provisions of this section should be sufficient as a protection to the public in obtaining an article of the nature, substance and quality demanded under such terms as brandy, whiskey or rum. The evidence given before us shows, however, that this is not always the case. There has hitherto been no definition showing what these terms should express in respect of the materials from which the spirit was obtained or the methods of preparation employed. It is also necessary under these Acts that there should be a certificate of the analyst, given in relation to a sample taken with the prescribed formalities, and that the certificate should itself establish a *prima facie* case for presuming that the article is not of the nature, substance, and quality demanded. The public analyst in this matter is in a very difficult position. He has first to form an opinion of the character of the genuine article. This may be a matter open to very great doubt and difference of views. He may have to arrive at his conclusion on very insufficient data, and may have no authority to which to turn for satisfactory guidance on the question. When he has surmounted these obstacles he has still to meet the analytical difficulties. If, for

example, he concludes that a spirit represented as brandy should be presumed not to be genuine in the absence of a material proportion of secondary products, he has to decide what to regard as a material proportion, which of the secondary products to take as a criterion for the purpose, and by what methods they are to be estimated.

Bramall, 450, 868-72, 888-93, 16601 *et seq.* Teed, 3645-53, 16930-60. Tatlock, 5608-9. Veley, 16330. Vasey, 17627. Thorpe, 18126-40. Cassal, 18243-59. Wilson, 18361. Appendix U.

We had placed before us illustrations of these difficulties and of the obvious disadvantages which result from them. Practically all the local officers who gave evidence laid stress on the anomalous position in which the authorities and their public analysts are placed in matters of this kind as a result of the conditions imposed upon them by the Sale of Food and Drugs Acts.

In the Islington prosecutions, to which we have referred in the earlier parts of this Report, the analyst who supported the prosecutions contended that a certain minimum quantity of secondary constituents should be taken as a standard for genuine pot still whiskeys. This standard has the advantage of being based upon the total of the analytical figures, and not upon a single one, as in the case of the "ether standard"; otherwise, however, it is open to similar objections. These are elsewhere given under the heading "the Ether Standard."

Dewar, 10914.

Although, however, it is impossible, with our present limited knowledge of the composition and properties of the secondary constituents, to establish trustworthy chemical standards for controlling the description of potable spirits, we are nevertheless satisfied that chemical analysis is capable of affording very important assistance in many, if not in all, cases of suspected misdescription, when the results of analysis are taken in conjunction with other evidence, such as that of the expert taster, and Excise records when obtainable, and when a common practice as regards methods is employed.

Schidrowitz, 4255-70, 15966-75. Thorpe, 18013-20. Vasey, 17620-27.

In order to assist in a more certain conducting of prosecutions under the Sale of Food and Drugs Acts it may be well to consider whether statutory provision may not be made for affording to the presiding magistrate assistance in determining the cases submitted to him by authorising him to obtain, if he thinks fit, the assistance of two assessors, being persons of practical or scientific knowledge of the matters involved, to sit with and advise him thereon. And for such purpose it may also be desirable to form under authority a panel from which such assessors may be selected.

It is also desirable to consider whether a Committee of skilled persons may be formed under Governmental authority, who might assist in mitigating some of the difficulties mentioned above by advising on technical questions which affect the administration of the Acts by local authorities and the practice of public analysts.

We are anxious to express our fullest appreciation of the most able and zealous assistance we have received throughout the whole inquiry from Mr. A. V. Symonds, the Secretary of the Commission.

(Signed) JAMES OF HEREFORD, *Chairman.*
L. N. GUILLEMARD.
W. E. ADENEY.
JOHN ROSE BRADFORD.
HORACE T. BROWN.
G. S. BUCHANAN.
J. Y. BUCHANAN.
ARTHUR R. CUSHNY.

AUBREY V. SYMONDS, *Secretary.*

28*th July*, 1909.

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Patent still admitted. **Bowes, 9746-9; Brown, 7393-5, 7403-10, 7423, 7453-4; Chaplin, 12278-81; Cowie, 8779-96; Dawson, 8058-60, 8097, 8144-7, 8194-5; Grant, 9156, 9158; Greenlees, 6501; Greig, 7324-33; Haig, 11870; Keith, 9412; Mackenzie, 9053; Mackinlay, 7576; McEwen, 9885; McKechnie, 12384-91; McPhail, 5717, 5722-4; Pratt, 11760-5; Schidrowitz, 3934-40, 3964-9, 3976-7, 4202-4, 4210, 4392-414; Scott, 7273-4, 7284-6; Thorpe, 18195; Usher, 7780-806, 8004-8, 8020-9, 8044-7; Walker, 7054-91, 7098-100, 7174-5, 7208-9.**
Pot still only. **Bramall, 629; Gilbey, 1986, 2051; Harris, 6153-8, 6162-5; McCallum, 11986; Murrell, 1159; Pheysey, 2813; Teed, 3108; Townsend, 7265-6; Walker, 7057.**
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Character. Thorpe, 17905-8.
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Splitting. Morris, 13674-5.

DIGEST OF EVIDENCE OF EACH WITNESS.

DIGEST OF EVIDENCE OF EACH WITNESS

ASPINALL, Mr. A. E.—

Is Secretary of the West India Committee, an association established early in the eighteenth century and incorporated by Royal Charter, August, 1904, 13397–13399, to promote the agricultural and manufacturing industries and trade, for the benefit of the British West Indies, British Guiana, and British Honduras, 13400. Witness's views coincide with the evidence given by Sir Nevile Lubbock, Past Chairman of the West India Committee, before the Committee of 1890 to 1891, 13408, 13409.

Rum: A spirit distilled direct from sugar-cane products in sugar-cane growing countries, whether in the pot or patent still, 13401–13404, 13427. Witness's Committee (comprising several proprietors of Jamaica estates) disagrees with the definition of rum as given by Mr. Nolan, who confines the term to a pot still product. Witness considers the proportion concurring with Mr. Nolan is very small, 13428–13435. The largest rum output is from British Guiana, which is considered part of the West Indies, 13417, 13418, the principal process being the pot still, 13419.

Witness draws attention to excessive duty levied on imported rum, 13405–13407, 13424–13426.

Derivation of rum: Described by the old Devonshire term "Rumbullion," 13412–13414. Witness believes rum is derived from "Saccharum," though it might be connected with the word "Rumbullion" by the Devonshire colonists who settled in the West Indies, 13415.

Jamaica rum: Witness's Committee agrees with Mr. Nolan that Jamaica rum should be specially distinguished, to prevent it being mixed with cheaper rum, and sold as Jamaica rum, 13420–13435.

BARNETT-SMITH, Mr. G. R.—

Is the English representative of Barnett and Elichagaray, brandy shippers and distillers, Cognac, 16138–16145.

The word "Cognac" is not allowed to be used in France for spirits with the red permit or acquit, or for sending them abroad, 16146, 16147. Spirits are kept in three separate chais, the 1903, 1872 and red permit stores, 16148, 16149. Cognac, mixed with red permit spirit, loses its stamp of origin and becomes red, 16150, 16151. Witness considers the French system of acquits an absolute guarantee of purity, 16152.

In witness's opinion brandy should be produced from the distillation of the wine, 16165, 16175, 16208, 16221, 16222, though blends of wines and other spirits are sent here as brandy, 16176, 16182, 16183. Customers can, however, insist on a guarantee under the white acquit system, 16177–16181, and witness would exclude all other spirits from being admitted as brandy, 16197–16204, 16208, 16209. Other spirits should be entered as plain spirits, 16205, 16210–16212, and must not be used for purposes of consumption, 16206, 16207, 16213. Discussion, 16214–16220, 16223–16228. Ageing of brandies in bond is in witness's opinion unnecessary, 16229.

Wine spirit other than Cognac mainly comes from the Midi, 16153, its flavour being very pronounced, 16154. The spirit is often sold pure, 16192–16196, though blenders prefer to eliminate the "terroir" flavour as much as possible, 16155, 16156. Wine spirit is preferable for blending purposes, 16166, 16167, though the grain spirit matures more quickly, 16166, 16168, 16169. There is much competition with the very cheap kind of brandies, 16184, mainly made from grain spirit, 16185, though sometimes from dried fruits with an admixture of grain spirits, 16186; these latter are sold as pure grape spirit on account of the percentage of ethers, 16186. Witness compares prices of these brandies with good Cognac and an average mixture of Cognac and other wine spirit, 16157–16164, 16186–16192. These spirits are sold just under the Cognac price to induce sales, and people buying this class of brandy are not educated to know the difference, 16230–16244, 16248–16250.

Australian brandies sell at about the same price as French brandies of equivalent strength and age, 16245; the quality is good, but the flavour is rather pronounced, 16246, 16247.

BLANCHE, Mr. John Jamieson—

Is sole Partner of J. J. Blanche & Co., Glasgow, whiskey blenders, and sole Proprietor of the Glen Elgin-Glenlivet (Highland malt pot still) Distillery, Elgin, and has been 27 years on an independent footing mostly as a retailer, 11496–11498, 11501–11503. He gives unprejudiced evidence, 11499, 11500.

Historical description of whiskey: Originally confined to pot still and malt the term has become the generic title of many processes and materials, 11512, 11513, 11524, 11525, 11548; the word is derived from the Gælic Uisque-beatha, 11513. Witness agrees with Dr. Allandale, editor of the "Popular Encyclopædia, 1885," that whiskey is a spirit distilled from barley, wheat, oats, and other grains, potatoes, beet, and other roots, 11514–11517, 11607–11609, 11615, 11666–11669. Use of potatoes, etc., would necessitate some modification in the present plant, 11518–11520, 11610–11612, 11616; difference is in the flavour, and when new it is hard to distinguish from Scotch whiskey, 11613, 11614, 11617, 11618; his reason for an open definition is to supply latitude for enterprise and development of process and materials, 11618, 11619, though not to the detriment of an established trade, 11674–11678. Witness has visited every distillery in Scotland and affirms that the materials used are all sound and wholesome, 11521–11523; these consist of malt and cereals, 11670–11672, and they have no bad whiskey in Scotland, 11544, 11708, 11728; he is not an expert on Irish whiskey but regards it as good and wholesome also, 11545.

Pot still whiskey: Witness considers that consumption of this has been fostered by blending, 11549; he uses a "dumpy still" in order to obtain a fatter whiskey, 11552; he considers that if "whiskey" were confined to pot still the fat Highland whiskey would lapse in favour of thinner Lowland pot still, 11553. The proceedings of the Islington case gave rise to a spurious demand for light pot still blends, which orders were, however, not repeated, 11595–11601.

Patent still whiskey: Witness has never sold this for consumption as self-whiskey, 11510.

Difference between pot and patent stills: This witness ascribes to difference in essential oils, 11629, 11630. By experiments on himself he finds that the patent still intoxicates more rapidly, but effects are more evanescent, 11620–11628, 11631–11638; there is little difference between old and new patent still, but in the pot still the ill effects of the old are more pronounced and lasting, 11639–11653.

Blending: Witness has traced a steady tendency towards light blends (Lowland malt and patent still) since entering the trade, and he regards this as more wholesome than Highland malt; it is preferred by those leading sedentary lives, 11504–11511, 11526; experimentally attested, 11554–11561; he considers the system a basis for the increase of Scotch whiskey trade, 11529, and hence restrictions on proportions of blends would be unwise, 11530, 11546, 11547; difficulty increased by the wide range of public taste, 11531–11533. He does not regard the public as being imposed upon by blenders, except in London in the matter of prices, 11534–11540, 11728, the Sale of Food and Drugs Act and Merchandise Marks Act being sufficient protection, 11541–11543, 11654–11661, 11665, 11696–11700. Witness blends about 286,000 gallons in six months, 11527, 11528.

Maturation: Witness is strongly opposed to age-limits, 11583, and does not favour change in present system; in event of this, however, he suggests differential duties of, say, 3d. per gallon limited to four years, 11593, 11594, 11679–11682, 11684, but it would be hard on small dealers, 11685–11690, though not

likely to be felt by public, 11691, except as regards deterioration, 11703–11707. The fixing of average dates would be a delicate matter, 11584, 11585, and witness considers that, not to give the advantage to foreign trade with those who preferred new spirits, the law should apply equally to imports, 11590–11592, 11692–11695. Witness holds, in the interests of sobriety and the maintaining of high standards obtained through maturation, that whiskey of 35 under proof should constitute a legal sale, 11602, 11605, a reduction in price accruing to consumer, 11701, 11702. Witness considers that the hygienic results of maturation are over-rated, but he prefers old whiskey as a matter of taste, 11584. He believes there is much Scotch whiskey sold now of less than two years, 11683.

Standardisation: Witness would strongly object to this, 11575; he thinks that State intervention should be restricted as far as possible, 11709–11715; he supposes it would take the form of a standard of others, but regards chemical tests as inadequate, 11576–11578, and as pointed out by Sir James Dewar it is possible to manufacture whiskey artificially and conform to any standard, 11579, 11580; the difficulty would also be increased by the mutability of public taste, 11581, 11582.

Labelling: Witness is of opinion that dealers should declare the class of whiskey sold, 11562–11565, 11662–11664. Prior to Islington case he had three classes of labels printed exhibiting the nature of his blends (specimens produced), 11566–11573, 11716, 11717, 11723–11726; their use is optional to customers and but few utilise them, 11574, 11718–11722.

Summary of evidence:

(1) Pot still, patent still, and blends of both, are entitled to be called whiskey.

(2) When sold they should be described on the label as either pot still, patent still, or blended.

(3) Does not approve of age-limit.

(4) Does not approve of any restriction either as to plant, materials, or method of manufacture.

(5) Does not approve of a chemical standard for whiskey.

(6) Does not approve of a standard of malt to be used in a blend before it can be called whiskey.

(7) Does not approve of any legislation that would restrict trade in its legitimate operations apart from what may be necessary to protect the public from adulteration, 11606.

BOARD, Mr. Thomas—

Is a director of Messrs. Joseph and John Vickers & Co., Limited, London, and of the Bristol Distillery Company, Bristol, 14970, 14971.

Gin: Witness thinks this should be made from grain spirit flavoured with juniper berries and other ingredients distilled in the still, 14972, 14975. Grain spirit used should not be so rectified as to lose all its bye-products, although German, potato, or plain spirit would make gin of a kind, 14980–14989, 14992–14997. Witness thinks that no restrictions or supervision of materials would be possible unless gin were made in bond, 14976–14978, 14993. He does not think that essences, or a strong infusion of juniper berries added to rectified spirit, are correct ways of making gin, 14973, 14974, 14990, 14991.

Irish whiskey: Witness makes in Bristol pot and patent still spirit, which he sells to blenders for making Irish whiskey, 15000–15003, 15012–15019. He himself makes a blend of the two and calls it "Bristol Irish Whiskey," 15001, 15002. His pot still product is made from maize, malted barley and oats, and has the exact flavour of Irish whiskey which he does not think is necessarily made in Ireland, 15004–15011, 15020–15027.

BOORD, Sir William—

Is Partner in the firm of Boord and Sons, Rectifying Distillers, Wine and Spirit Shippers and Merchants, London, 13308–13313, 13316. Was Member of Parliament for Greenwich, 1873–1895, 13314, 13358, and Member of the Parliamentary Committee on Spirits, 1890–1891, 13315, 13319, they concluded that no further provisions were necessary regarding adulteration, 13360–13365. Witness has since had no occasion to change that opinion, 13366.

Gin: A potable spirit specially rectified to a certain point, and re-distilled with juniper berries and other flavouring herbs. This should only be distilled by those holding a rectifier's licence, using the necessary stills and plant, under the control of the Excise, 13317–13329, 13331, 13349–13355, 13393–13395. Molasses could not come within this definition, being a coarse spirit, 13327, nor does witness consider German spirit as suitable for gin as grain, the latter making a fatter spirit, 13340–13348. Provided the result were the same, witness would not object to the use of essences in the manufacture, 13356, 13357. Adulteration, if any, is in mode of manufacture, not materials, 13367–13369. The strength of witness's gin is about 25 per cent. over proof, 13396.

Rum: For trading purposes witness recommends descriptive labels, so that Jamaica rum mixed with other rums cannot be sold as Jamaica rum, as at present done, 13332–13336.

Maturation: This is unnecessary, gin not being improved by keeping, 13390, 13392.

Analysis: Witness considers this very little use, as provided the spirit is pure, the origin cannot be distinguished, 13337–13339.

Witness hands in copy of "Lancet" of August, 1903, giving analysis of their gin showing the small proportion of secondary products, 13319–13321, 13389–13391.

Description: Witness considers the rectifier should guarantee the nature of the article sold, 13379–13373. He sees difficulty of checking description given by dealer over the counter, unless it were possible to rely on chemical analysis, 13374–13388.

BOWES, Mr. Robert—

Is grocer and spirit merchant in Frederick-street, Glasgow, started in 1872, has two public-houses there, 9707–9712, 9830–9832. Much the same whiskey drunk in both houses, though not so much of the higher class in the poorer locality, 9833. Is not licensed for consumption on premises, 9829. Sells the ordinary blended whiskies, mostly Scotch (a little Irish), does not sell any pure grain or pure malt, 9713–9717, 9734–9739. The only proprietary blend sold by witness is Henry Thomson's, 9744. Glasgow is a very large centre of whiskey trade, and witness thinks the people there know more about whiskey than Londoners, 9798–9801. A good deal of patent still whiskey sold in Scotland—especially Glasgow—9834, 9836. No connection between the occupation of the people and the whiskey they drink, 9835.

Blending: Proportions of this, 9718–9720, difference of cost, 9721, 9722. Cambus whiskey used for blending, 9723–9726. All blended in bond according to witness' instructions, 9727, 9806, 9807. Sometimes added to—according to taste—in cellars, but witness knows what is put in, and gets Excise permit, 9808–9813. Would object to reduction of whiskey in bond, reasons for this, 9814–9817. Difficulty of limiting proportions of malt in order that a whiskey should be called "Scotch," all blends of Scotch whiskey are "Scotch," no object in distinguishing them, 9728–9731, the consumer will buy according to his taste and the price he can give, 9732, 9733. Most people know they are getting a blend and prefer it, 9740, 9741. If they wanted pure malt, would ask for it by name of distillery, 9742, 9743, 9818. Witness does not keep these whiskies on show, 9819. Has had to alter blending according to taste of the public, 9751–9755. Their cheapest blend contains one-fifth malt, its average being three years, 9803. Irish blend rather cheaper than Scotch, this very good, but witness prefers Scotch, 9821–9828.

Maturing of spirits: Average age of whiskey sold by witness is seven or eight years, but has a fair quantity of eleven and twelve years' in stock, and his customers, therefore, get extra value for their money, 9838–9841. Age improves and adds to the value of whiskey, 9765–9767. Thinks it advisable that an age limit should be fixed, would benefit both consumer and trade, 9772–9776, but this would depend upon the kind of whiskey, 9788–9791, the lowest limit for any kind being two years, 9792–9797.

Labelling: All pure patent still whiskies called "grain whiskey," and name of distillery, Cambus, Cameron Bridge, etc., 9758–9761. Witness does not think it necessary to label bottles with "malt," "grain," or "blend," but would be willing to do so, though not to give proportions, 9777–9785. Has heard of a potato spirit being sold as whiskey, knows nothing

about it, but would strongly object to it, 9786, 9787. He does not approve of a whiskey, thirty-five under proof, with only 10 per cent. malt, being sold in London as "Old Scotch Whiskey," 9802, 9804, this would not be done in Glasgow, 9805.

Flavour: Witness is not sure that he could distinguish between Irish and Scotch patent still whiskey and a patent still spirit produced in London, though there is a characteristic flavour about patent still, 9768–9771.

Definition of whiskey, 9745, 9746. Applies to patent still as well as pot still, 9747.

Materials used in the production of whiskey: Contents of the mash, 9748–9750.

BRAMALL, Mr. Arthur Mellor—

Is Standing Solicitor to the Islington Borough Council, 372–3. In 1904 the attention of the Council was directed to certain sales of whiskey, 374–377. Samples were bought, and summonses issued. Two test cases (Wells and Davidge), 379–382.

Irish whiskey sample (Wells) 25 per cent. under proof, retail price of, etc., 385–387. Sample was exactly as received by Wells from Belfast (Kirker, Greer and Co.), 388–390, 394; where it was blended 90 per cent. patent still spirit (invoiced to distillers as such, 415–417), and 10 per cent. pot still, 391–393; price to Wells, 395–398. No label on bottle, but "Irish Whiskey" was asked for, 399–401. Distillers' account of the mash from which the patent still spirit was made in Ireland, 405–410.

Scotch whiskey sample (Davidge), bought in London (Stevens, Buer and Co.), invoiced to Davidge as fine Scotch whiskey, 411; sample was blended by this firm of 90 per cent. patent still and 10 per cent. pot still spirit, 412–414, 417. Cost of the pot still and patent still spirits used in this blend, 413–15; prices at which Davidge bought and sold blend, 419–421; patent still spirit was invoiced to blenders as "grain aqua," 415–418. Description on sample, 422–426. Bottled by Davidge, 424–5; whose sale was quite fair, 421, 427.

Proceedings taken against Wells and Davidge before Mr. Fordham, who convicted, 431–435; appeal to Quarter Sessions when Court was divided, 437–439. Appeal not renewed on account of Commission, 440.

Form of the summons, 441–443.

Statement of case for the prosecution: Contention that patent still spirit is not whiskey, 402–404; and the Irish whiskey, which had been asked for, is a spirit distilled in a pot still from malted and unmalted barley, with small additions of wheat, rye, or oats (*i.e.*, grain indigenous to Ireland) and distilled in Ireland, as the water is a material consideration in distillation.

The article sold in this case was spirit distilled in a patent still, largely from rye and maize, and as this does not come within above definition of Irish whiskey, the purchaser was prejudiced, 445–453.

Explanation of action of patent still (special reference to "spirit plate"), 487–8; the action is said to account for lack of flavour in patent still spirit, 489–491; which is nearly pure alcohol, 468–472, 492–494. Flavour of pure patent still spirit, 474–477. Method of distillation in patent still intended to produce this, 477–8.

Cost of labour and materials much less in patent than pot still, 510–512; discussion, 512–515. Cost of peat as fuel, 516–518. Quality of barley used in Scotland, 518–520.

Patent still spirit not injurious to health from medical point of view, 699–702; though witness does not quite agree with this, 495–509, 703–708.

Advantage of cheaper price of patent still spirit to retailers, 598–602.

Bye-products in patent still spirit, and in pot still, the one-quarter per cent. of these present gives different flavour to the different spirits, 479–486; demonstration by analysis, 486, 811–832.

New spirit: Patent still better than pot still, 903–905.

Patent still and silent spirit, witness considers them nearly synonymous terms, 804–810, 833–838.

Sir Algernon West's evidence, before the Committee of 1890, on the definition of "Irish" and "Scotch" whiskey, etc., 529–536. References on same subject to Mr. Molyneux's evidence before same Committee, 545–553; also evidence of Sir James Bell, 553; and Mr. Cobden Samuel, 553–560. This Committee did not attempt a definition of whiskey, 561–563; but refer to Dr. Pavy's evidence for general definition, 563, 565–595 (definition of whiskey, 593). At the trial witnesses for defence were unable to detect difference between patent still spirit and pure alcohol, 596.

Investigations in trade as to term whiskey chiefly made by Dr. Teed, 839–841.

True definition and analytical standard of whiskey, 736–748, 865–872, 887–896, 911–923.

The name "whiskey" should be only applied to pure pot still spirit, 453, 671; discussion, 454–460, 669–679.

Distinction between pot and patent still spirit, 684; and determination of proportions of blend, by analysis, 685–690.

Drunkenness and pure alcohol, 900–1.

Advertisements of pot still distilleries, 638; distinction between pot still whiskey and patent still spirit in these, 638–644.

Proportion of pot and patent still distilleries in Scotland and Ireland, 645–651.

Wholesale sale of essences for mixing with patent still spirit to sell as whiskey, 652–656.

Concoction of spurious spirits in bonded warehouses, inability of Revenue Officers to prevent this, 657, 658–668.

Retail profit on sale of patent still spirit blends, effect of duty on these and reference to Wells case, 709–735, 908–910.

Increase recently in consumption of patent still blended whiskey, 842–844.

No permissible blend of pot and patent still spirit which can, in view of witness, be sold simply as Scotch or Irish whiskey, 606–608. Warranty from wholesale seller to retailer, 614; discussion, 614–621; prohibition of sale of patent still spirit, reasons for, and against this, 622–628.

Proportions, etc., of mixture in cases of blending should be stated on label, 603–605, 609–613, 680–683, 914, 917–920, 924–931.

Materials used in distillation, indigenous materials, definition of, with special reference to maize, 776–803, 859–864. Necessity of using best materials in pot still, 632–637.

Modifications in pot stills, rectifying heads, etc., 750–775.

"Self-whiskies" superior flavour, etc., of these, 845–852.

Pot still distillers in Scotland afraid of blenders, 853–858.

Flavour of Irish whiskey, 878–9. Very few patent stills in Ireland, 880–882.

Bourbon whiskey, 461–468, 897–899; Sir Algernon West on this before Committee of 1890, 536–539.

Publicans and distillers: Tied houses, 873–877.

Brandy, definition of, in Spirits Act, etc., 691–698, 902.

Recalled (Commenting on the evidence of Mr. Walter, K.C.)—

All the feints do not go back in patent still. Fusel oil is sold as a bye-product, 1118–9. In the pot still they all go back and do not go into the spent lees or wash, 1119–20.

Methyl-alcohol is not one of the higher alcohols, 1120–21. Mr. Walter concurs, 1123.

At first the patent still distillers objected to stating on the label that their product came from a patent still, but, since then, this has been modified, as Mr. Walter said; but they do object to stating the proportions, 1121–2.

A third still is always used in Irish pot still distilleries, 1122.

The total cost of production of a proof gallon of pot still is enormously greater than a proof gallon of patent still, 1123–4.

Recalled.

In March, 1904, nine summonses were taken out before Mr. Fordham in relation to the sale of spirits, 16487–16491, Hillyer's, however, being taken as a test case, 16492–16496. Mr. Avory, K.C., and Mr. Bonsey defended; prosecution under Section 6 of the Sale of Food and Drugs Act, 1875, 16497–16501, 16598, 16599.

Islington Case: The nature of the complaint was the sale as brandy of a bottle containing, according to Dr. Teed's analysis, 60 per cent. of a silent or neutral

spirit and 40 per cent. only grape spirit, 16502–16528. Witness describes the official proceedings taken, 16751–16766, which resulted in the conviction of the defendants, 16529–16577. Mr. Avory contended that with patent still spirit it is impossible to distinguish by analysis, whether it be derived from wine or grain spirit, hence the said 60 per cent. neutral spirit might have been a wine spirit distilled in the patent still and thus brandy, 16584–16588. A witness in the case stated that the trade definition of brandy was not confined to the distillation of the grape, but that brandy might retain its name with up to three-fourths admixture of grain spirit, 16873–16876.

The defence fell through because the witnesses (notably Dr. Gordon Salamon, Mr. Hehner, 16579) agreed that brandy must be produced from grape spirit, and the merchants admitted the spirit sold was a grain spirit, 16578–16583, 16589–16594.

Inspectors are handicapped under the Sale of Food and Drugs Act, and witness suggests amendment of the provisions which allow the private individual to prosecute without analysis, but make it a condition precedent for public authorities, 16600–16619, 16698–16703, 16705–16707. What is required is to allow a public authority to take proceedings under the Merchandise Marks Act in order to protect the public against misdescription of goods, 16620–16631, 16704, 16708; discussion, 16716–16721. He illustrates the difficulties of enforcing the Sale of Food and Drugs Acts, 16709–16716.

The terms Scotch and Irish whiskey should be geographical, not generic, terms, 16832–16839.

Standardisation of spirits: The standard should be fixed from the public point of view, and in the interests of the consumer, 16634–16640, 16876. He proposes the adoption of the French acquit system to ensure the entry of the pure product, 16632, 16633, 16642–16672, and would like some such body as the Local Government Board or the Board of Agriculture to fix a standard by Act of Parliament, 16673–16697, 16726–16730; discussion, 16783–16800, 16813–16816, illustrating present difficulties arising from different application of the law, 16685–16695. Witness mentions definition given for butter, margarine, etc., under the Sale of Food and Drugs Acts, 16731–16736, and discusses the vinegar report, 16737–16747. He believes this fixed standard would be welcomed by traders, and sees no difficulty in its application, 16748–16750, 16780–16783, and considers it should be left open for revision, 16772–16778, parallel of the milk standard in Victoria, by the Pure Food Law Committee, 16772, 16773, 16779. This would increase the powers of the Excise, who at present are handicapped by the lack of a fixed definition, and cannot act without proof of misdescription, 16801–16812, 16844–16855. He cites a case where the same spirit was described as Scotch and Irish whiskey, with Excise knowledge, and considers this would be prevented if his suggestion were adopted, 16822—16830, 16840–16843. Discussion, 16856–16872. In his opinion publicans do not knowingly misdescribe spirits, the penalty being too severe, 16767–16771.

BROWN, Mr. Robert—

Is senior partner of Robert Brown and Co., an old-established firm of blenders, Glasgow, doing almost entire trade in bulk, 7385–7392.

Definition of Scotch whiskey: Any spirit manufactured in Scotland from cereals whether pot, patent still, or blended, 7393–7395, 7403–7410, 7423, 7453–7454. Witness attaches great value to word "Scotch" as applied to whiskey, which represents quality and flavour, 7447–7450.

Blending: Witness states that their whiskies are sold by sample and price, undescribed unless customer specially desires it, 7411–7415. Witness's firm would have no difficulty in giving compositions but objected to labelling, 7416–7423, which would not, however, be prejudicial to them, 7424. Witness considers blended Scotch whiskey unpalatable without a proportion of grain, 7426–7429, though some distillers produce excellent self-whiskies, 7430.

Compulsory bonding: Witness does not agree with this; would acquiesce on the basis of advantage to public health. Personally prefers to drink old whiskey, 7433–7436.

Witness's knowledge of Irish grain spirit slight; does not think there is much difference between Scotch and Irish grain spirit, the latter might be slightly thinner, 7444–7446, 7451. Consumer could not distinguish between them, 7456, though he could with a blend; characteristic flavour of Scotch whiskey being derived from malt, 7452, 7455, 7457–7460.

Greater dilution with water not more palatable with malt whiskey than with a whiskey consisting of 70 to 80 per cent. grain, 7431–7432.

Witness believes that 30 per cent. malt is used in patent still mash. Witness's firm deals with two patent still distillers, one stating that not less than 30 per cent. malt is used in the mash, 7396–7402.

Witness considers a good proportion of malt in Scotch whiskey should be maintained, suggests 25 per cent. as a minimum, but objects on principle to any standard, 7461–7468.

BUCHANAN, Dr. G. S.—

Witness is Chief Inspector of Foods at the Local Government Board (May, 1909). He handed in a memorandum (App. U.) relating to certain of the matters which had been under inquiry, 18507.

BURNETT, Mr. D.—

Trading as Sir Robert Burnett and Co., Rectifiers, Brandy, Whiskey, Wine and Vinegar Merchants, dealing principally in English gin, and occasionally in Hollands, 13156–13160.

Hollands: Mainly used by firm for flavouring special gins (not in their own brands), 13160–13163. This is not done in bond, 13164.

Gin: A rectified potable spirit produced by distillation from corn flavoured with juniper (distilled from the berry) and other herbs, the raw materials being the same as for whiskey. No other restriction is necessary in manufacture of gin, 13165–13178, 13188–13191, 13193, 13196–13198, 13202, 13220–13223. Witness objects to naming flavouring herbs, 13194, 13195. If made from juniper oils the gin would not be good, 13199–13201. He does not think good gin can be made entirely in the pot still, 13185–13187. Witness does not know of any instance of gin made from molasses, but would approve of a declaration if it were. The Excise know what is the product of corn and of molasses, 13203–13209. The cheap variety, witness would say, is a spirit flavoured with oils without rectification, this is mainly exported gin, 13210–13219. He has no knowledge of the "Jigger" gin, 13232, 13233.

Maturation: Minimum period unnecessary, as gin (whether Hollands or British) deteriorates by keeping, 13179–13183.

Vinegar: Witness agrees with Dr. Hamill's recommendations regarding description of this, 13226–13231.

CALDER, Mr. James Charles—

Is a partner in the firm of Alexander and Macdonald, wholesale wine merchants, Leith, and director of James Calder and Company, Limited, distillers, Bo'ness, also partner of James Calder and Company, Stronachie Distillery, Pathstruie, Perth, 5279–5284, 5328, and has been in the business for twenty years, 5396. Bo'ness is patent still only, employing pure malt and grain and malt, 5282, 5283; Stronachie Distillery is pot still only, 5285. Witness is a maker of yeast, 5397. There is extensive trade done in Scotland in cheap whiskey, 5342, 5343, 5353, pure grain or blend up to 20 per cent. malt, 5344–5350, of which witness has had no complaints, 5351, 5352; classes, pure malt, pure grain, or blends, price according to age, 5354, 5356. The amount of pure grain whiskey consumed in Scotland is in excess of the pure malt, 5357, 5358.

Definition: Witness describes whiskey as a spirit made from cereals (origin immaterial) saccharised by malt, and distilled in Scotland or Ireland, 5286–5291; he contends that both pot and patent still spirit are whiskey, 5315, and had not heard this questioned until the Committee of 1891, 5316; in early days whiskey was referred to as grain or malt "Aqua," 5317, 5318.

He is opposed to chemical standardisation of whiskies, and considers it would be impossible to prevent unscrupulous mishandling, 5364, 5365; chemical analysis could not expose false statements, 5378.

American stills: Witness hands in a sketch of continuous three-chambered still in use throughout America, 5379, 5380, for distilling straight Bourbon whiskey from maize, 5380, 5381, not used in United Kingdom, 5382; this produces a very similar class to grain whiskey; he would extend the term "Whiskey" to grain product from this still, 5383.

Comparison between pot and patent stills: Practically only two mashes now used in Scotland for grain whiskey, one about 25 per cent. malt and 75 per cent. maize, the other relatively one-third each, rye, maize, and malt, 5292, uses no molasses, 5293; use of home or foreign barley determined by quality, sun-dried barley desirable, having greater converting powers, 5294, 5295. High present price of Norfolk barley, 5296–5298. He emphasises the fact of there being no essential difference between pot and patent stills, 5299; distillation in patent still is more even, and ability of distiller to regulate impurities is greater. In pot stills heating and cooling systems vary, and impurities are more numerous and ungovernable; patent stills intended to obviate this, 5300; pot still is the more costly process in material, coal and labour, etc., 5301–5308. Selling prices are analogous, 5308–5310, and include storage in the case of malt whiskey, 5311–5314. Malt distilleries work only six to nine months because of the short demand, the difficulty of malting in hot weather, inferiority of water, and difficulty of disposing of draff, 5384. Distinction between Irish and Scotch patent still whiskey is indistinct, but their use is not interchangeable in blends, 5388, 5389, due to the water and the still, 5390; materials are identical, 5391; difference not so great as between the pot stills, 5392. Patent stills could be made to produce whiskey resembling pot still, including peat flavour, 5400, 5403, by increasing impurities and collecting them at different temperatures, 5401, 5402, 5404. Does not think that pot stills can now be heated with peat, 5405, 5406.

Blending: Considers the addition of grain whiskey to malt a valuable improvement, 5339, 5340, making latter more palatable, more digestible and lighter, also reducing cost and making it possible to use finer and older malt, 5359, 5360. The universal tendency is towards blends in Scotland, 5331, though public does not like these new, 5361–5363. Their object is to preserve the flavour without the heaviness of fine malts, 5332. Ages of components vary greatly according to blend, price and quality; patent still not used under two years; is used up to twenty-five years; the lighter the malt, the quicker it matures, average from five to ten years, 5329, 5330; the public buy on flavour and are indifferent to nature of whiskey, 5333–5338. Essences being against Excise regulations, which are strictly enforced, their use is impossible in Scotland, and witness had never heard of these until now, 5395; thinks they must be kept in England, 5396. Utilisation of yeast materially reduces cost of production, 5398, 5399. Witness objects to compulsory labelling on score of its uselessness, 5376; unfair and unnecessary to insist on proportions of blend being given, 5377. Regards it as an Irish rather than a Scotch question that grain whiskey is used to conceal immature malt in blends, 5393, 5394.

Maturation: All whiskey improves in flavour with age; this varies according to brands and nature of cask, the change is appreciable to the eye and taste, in grain whiskey improvement continues up to seven or ten years, and Highland malts without limit, and consists in a modification of components, 5319–5322, 5372, 5373; after this grain whiskey frequently takes on flavour of cask, 5374, 5375; it is frequently stored in sherry casks, but they do not select pure pot still casks, 5323–5325; whiskey which takes flavour of oak is rejected and re-distilled, 5326, 5327. Witness does not think flavour comes from the cask except in case of sherry or Malaga casks, 4385, although whiskey would not mature so well in bottle. He thinks permeable nature and acids of oak wood may account for maturation, 5386, 5387. Average age of clearances for 1907 is three years, 25 per cent. of clearances are under one year old, 5341. Witness would favour a two-year age limit for all whiskey, 5366, 5367; unfairness to grain producers would occur, but benefits to public would counterbalance this, 5368–5371.

CASSAL, Colonel Charles Edward, V.D., F.I.C.—

Is a Fellow of the Institute of Chemistry and Past Censor of that body, and public analyst for Westminster, Kensington, and a number of other localities. Witness has had 30 years experience in practice as an analyst, 18208–18210.

He defines brandy as a spirit which should be obtained by the distillation of the fermented juice of the grape, said distillation being conducted in an apparatus which preserves certain bye-products which are essential to the character of the spirit, 18215.

The degree of fractionation, the nature of the apparatus, and the way in which it is used, are the points upon which a decision as regards modern stills in this connection must be based, 18219. The creation of an authority to frame definitions would be a matter of satisfaction to the analyst, who, at present, must make his own definitions, 18222–18224, 18244. The principal standard now accepted by British public analysts is the ester standard, 18225, and witness considers it fairly satisfactory, if it is not used too rigidly, 18226. It is not competent to the public analyst to take cognisance of taste, 18233

Brandy flavoured alcohol, regardless of origin, is not brandy, and such a mixture should be described by some distinctive name or names, 18241.

Witness considers that power of inspection should be conferred upon inspectors under the Sale of Food and Drugs Act, in order to enable them to take a sufficiently large sample of brandy for a thorough analysis, 18261–18269.

CHAPLIN, Mr. W. H.—

Is Managing Director of W. H. Chaplin and Co., Limited, Wholesale Wine and Spirit Merchants, London, 12272, 12273. Their business is a "market house" one, 12275, 12276, of which a large part is in cask, 12277.

History of "whiskey": Witness shows that in their list of 1891, Scotch pot and patent still products were called "whiskey," 12278–12281; they only listed Irish pot still, 12282.

Definition of Scotch whiskey: Witness is opposed to a compulsory minimum of malt in the mash before the product can be called "Scotch whiskey." Any such regulation would fail to assist the consumer in obtaining better whiskey, but would probably assist in the distribution of faulty blends, 12297–12299.

Compulsory bonding: Witness is not in favour of an age-limit, as by having the hall-mark of Government approval, a product of two-years' maturation might be put on a level with one of several years' maturation, by labelling the former as having complied with all the requirements of law, 12288, 12289. Witness would prefer a graduated duty, 12293; discussion on this, 12293–12296. Witness considers Irish pot still unfit for consumption under five or six years old, thereby demonstrating how ineffectual a two years' age-limit would be, 12314.

Blending: Increase in Scotch trade since introduction of blends, and consequent decrease in Irish pot still whiskies; this is attributable to the lightness of the former, which makes it more digestible, 12283–12286. In blends, witness considers the pot still should be old, 12287.

Labelling: Instances given of very cheap whiskies being labelled as "Fine old Scotch whiskey," or "Fine old Highland whiskey"; this witness does not consider satisfactory in the interests of the public, 12307–12309, 12322; discussion, 12316–12318. In cases of definite knowledge of mis-statement Excise have taken action, 12319, 12320. This labelling is done in bond, 12321, 12322.

Export trade: Large export trade in new whiskey, 12290. Witness considers a certificate of age of a blend should be given by the Excise, as without this, cheap new grain whiskies going abroad as Scotch whiskies have a damaging effect upon the better class of Scotch whiskey, 12290–12292, 12322, 12323. Witness agrees that it might be possible to pack and label bottles for export and delivery f.o.b. in Glasgow, at a cost of 3s. a case of one dozen bottles, though if the work were done in London it would be about 4s. 6d., 12302–12306.

Malt whiskey: Recent introduction of new lines proved unpopular, and many retailers returned their stock, 12283.

Standardisation: Witness objects to a chemical standard, 12300, 12301.

Irish whiskies: Certain Irish pot still products are lighter and more drinkable at two years than Highland malt, 12310, 12311. Irish distillation differs from Scotch; this largely affects the flavour, 12312, 12313. Prices vary of products from different distilleries, owing to different results, 12313. Witness does not consider Irish grain whiskies equal to Scotch, 12315, 12325–12327.

Recalled.

Definition of brandy: The dictionaries agree that the word comes from "Branntwein" (burnt or distilled wine), 16964. A qualifying term has always been applied to spirits not derived from grape juice, 16965. For a long time the word "brandy" was only used in connection with the spirit imported from Cognac, Bordeaux and other French districts, 16966–16967. Some English distillers make an imitation article called "British Brandy," 16969. The term "brandy" ought not to be restricted to any particular country, 16974.

Quality of brandy: The destruction of vineyards was followed by alteration in the kind of brandy exported from the Cognac district, 16980. The production at the present time is below its former level, but there has been a material increase in the output from other parts of France in certain years, 16993.

Protection of brandy: Certificates of origin are valuable, but the expert taster is the only reliable guide. There is no kind of control possible over small proprietors; and, in any case, such control would only protect the first receiver, 16998. Bonded bottled brandy would be protected if our Customs would alter their present practice of refusing certificates of operations performed under their supervision, 16999. He recommends tasting for buying purposes, but analysis would be of some use as a recommendation of the article, 17003.

Distinction of grape juice brandy: His firm has lately distinguished between "grape" and "mixture" brandies. Has always held guarantees of pure brandy at disposal of customers, 17007–17013. It guarantees pure grape by protective labels, 17015–17016.

Cognac: The brand "Cognac" is only attached by the firm to anything shipped by a Cognac house as brandy. This term will, in future, be restricted to the produce of the Cognac districts, 17021.

Minimum and maximum coefficients: It is not possible to fix a precise maximum or minimum proportion. Chemical analysis should be supplemented by tasting, 17026.

Compulsory storage in bond: He does not recommend this, because buyers of brandy would be driven to rely upon the stocks held by merchants on this side. He gives figures of imports, home consumption and stocks held in pre- and post-phylloxera years, 17028, 17029.

CHURCH, Sir William Selby—

> Was President of the College of Physicians and Physician to St. Bartholomew's Hospital and is still Consulting Physician to the Hospital, 10450–10453. Has had 40 or 50 years' experience, 10453.

Whiskey for medical purposes: Witness attaches importance to matured whiskey, 10472, 10505, 10518, has seen bad results on patients of raw spirits, 10518, 10519, but has no knowledge of different kinds, 10471, 10473; he has not noticed injurious effects from one kind more than from another, 10474; he trusts in his wine-merchant, 10511, and advises his patients to go to the best, 10509; he attributes value of whiskey to its alcoholic strength, 10475–10481, 10504, which is as good as in brandy, 10500. Under law both must contain a certain proportion of this, 10513. Its main objects are to stimulate the heart and as a substitute for food, 10480. Patients as a rule prefer it to any other form of alcohol, 10498, 10499, but witness still considers brandy the best, as it generally agrees better with a patient, 10501–10503, and they cannot always afford good whiskey, 10510, and he would never advise cheap or raw spirits, 10512; thinks a check should be put on the sale of these, 10514, 10515, which contain many things besides alcohol, 10517, but cannot trace the effect of these on patients as he does not know the age of the spirits they consume, 10520.

Whiskey as a beverage: This is very much more largely consumed than formerly; has almost completely ousted brandy, 10458.

Spirits used in the treatment of disease: Brandy, whiskey, gin and some rum, 10454, 10455. Witness himself has noticed more change in the dietetic than in medicinal use of spirits, 10456, 10457, 10459. Brandy being much the most used medicinally, 10460, 10465, 10470, but finds on enquiry that more whiskey is used than he imagined, 10461. Figures to show the comparative amounts of these used in different London hospitals, 10462–10469, 10488–10491.

Witness does not know when the use of whiskey began to increase, as it is doing at present, 10492–10496; attributes this to its dietetic uses, 10497.

Bye-products: Witness is almost entirely ignorant of these, but believes that in wine they become less deleterious after some time and suggests it is the same with whiskey, 10482–10487, 10506–10508.

CLARK, Mr. H. H. G.—

> Is senior partner of Matthew Clark and Son, London, sole agents for De Kuyper and Son, importers from Rotterdam of Hollands or Geneva gin, 13057–13062.

Comparisons between Geneva or Hollands and English gin: Both are made from grain only and flavoured with juniper, the only difference being one of flavour, but they can never be mistaken, 13071–13073, 13087, 13088, 13095–13098, 13111–13120, 13137–13140, 13150. This difference is probably due to: (1) The different proportions in materials used in the grain spirit (the foreign article being made roughly in equal proportions of malted barley, rye and maize), 13063–13066, 13081, 13134–13136; (2) Hollands is mainly a pot still product, whilst English gin is patent still, 13127–13131; (3) In foreign gin the whole mash is fermented together, 13131–13133.

Maturation: Deterioration of gin if kept in cask, 13014, 13015, 13080, 13101, 13141, 13155. Gin is excluded from two-year certificate required in Australia, 13076.

Geneva: Manufactured mainly in Schiedam in pot still, four distillations. Spirit used is never made by the gin distillers, who purchase the product, add the juniper berry and other flavouring, and redistil it, each firm having its own flavouring essences, 13083–13086, 13105, 13106, 13121–13124. Differences in standard are detected by taste or smell, 13084. Witness emphasises the use of the pot still, as he considers patent still largely destroys the distinctive flavours, 13107–13110. He can only testify to quality of De Kuyper's gin, but believes the gin imported here is properly made, 13089, the cheaper gin made from other sources than grain, going to other countries, 13089. Greater proportion sold in bottle than cask, 13100, 13101.

Description: No Government control or manufacturers' association over description of Hollands or Geneva gin, 13090–13094. If accuracy were checked, it would probably be by an officially attested declaration in Holland, similar to the form in Australia, 13102–13104. Gin is described as either "Hollands" or "Geneva," the label giving both words, although "Hollands" is more generally used, 13142–13144. Geneva is also made in Belgium, but not much comes to this country. Witness does not consider it should be called Hollands, as this means Dutch manufacture, 13145–13149. The description "Very Old Geneva" should not be mistaken for gin, as it is a liqueur containing a large proportion of sugar, and gin proper contains no sweetening, 13151–13155.

Cost: Gin is 2s. 6d. to 2s. 8d. a bottle as compared with 3s. 6d. for whiskey, 13077–13079, and averages about 17 under proof, 13099.

Witness does not agree with definition of gin as rectified spirit distilled from turpentine, 13125, 13126.

CLARKE, Mr. Andrew—

Is partner and managing director of Robert A. Taylor, Limited, pure malt distillers, Coleraine Distillery, Ireland, 10766–10768, who make all malt whiskey known as Coleraine House of Commons Whiskey, as supplied to the House of Commons since 1843; it is ten years' old whiskey, 10769–10770.

The firm has been established over 80 years, 10771; most of their whiskey is sold as self whiskey, some for blending, 10781. Chief demand in North Ireland for self whiskey not blend; the working man knows the difference, and if he asks for it and is willing to pay for it he gets self whiskey; if not, a blend, 10782–10785. Large trade done in bottled whiskey, 10819, 10820.

Maturation of whiskey, 10821–10824; witness would like age stipulated 10825, 10826, and Excise guarantee given to distiller 10816, 10818.

Blending: This is largely done and not objected to, 10804, 10805, but witness would like this limited to Scotch or Irish patent still and pot still spirit, 10806–10807. Witness's distillery do not blend themselves but insist on 50 per cent. of their whiskey being used in any blend labelled "Coleraine" 10811, 10812.

Irish or pot still whiskey, 10790–10792; witness has no direct knowledge of materials used, except in all malt whiskey, and could make no exclusion, 10793–10803. Production in witness' distillery: (1) Materials used, 10772, 10773. (2) Method of distillation, 10774–10777. (3) Quantity, 10778–10780. (4) Flavour is much the same as Highland malt made without peat, only difference is attributable to water, 10787–10789. (5) Ageing an important point, 10827, 10828.

Labelling: Difficulty of this in blends; witness thinks it should be geographical; if Irish pot still predominates it should be called "Irish" as against "patent still," 10808, 10809, 10813–10815. Statement about this in *précis* not quite accurate, 10831. Consumer generally asks for "Grain" whiskey if he wants patent still, 10832, 10833. Not allowed to label whiskey as "bottled in bond"; thinks permission to do this would be valuable, 10834, 10835, but it is so described in price list, 10836, 10837.

COMBESCURE, Monsieur A. (Mr. Barnett-Smith acting as interpreter)—

Is a distiller in the Midi, 16403, 16415, selling direct to merchants, 16419–16421, 16445–16447, distilling entirely from wine, 16404, 16405, 16418, carried on under Excise supervision as in Cognac, 16456, 16471–16473, working solely under the white acquit system, 16407. He considers the system a perfect guarantee, 16408. They buy and make their own wines for distilling, 16414. His produce (which includes Marc brandy, 16485) is consumed in France, 16443, 16444, 16448, and is mostly sold before the next vintage, 16474.

Mr. Barnett-Smith averages the price of Cognac brandy off the still at 4s. 10d. per gallon, 16423–16429, and the Midi brandy at about 1s. 9d., 16430, 16449, 16450. Grain and beet spirits are cheaper, 16431, 16432; the wine spirit costs double the price of the grain spirit, 16437, and is of superior quality, 16438.

Witness gives the output of brandies in the Midi, 16439, and his own, 16440, and states that only wine spirit is distilled in his district, 16441. The product is sold as eau-de-vie, pure wine, 16451, 16452, 16459, 16461, 16463. Their spirits are only sent out in casks marked with the initials of the producer, 16455–16458, the acquit d'origine accompanying the spirit, 16460. Midi distillers do not object to the delimitation of the Cognac district, 16462.

Processes of distillation: These are continuous from the Premier Jet, 16409, 16466, 16479–16484, with no brouillis or feints, 16469, 16470, by direct fire, 16410, this giving better results than the steam process, 16410–16413. The spirit thus retains all its secondary products and matures similarly to other wine spirits, 16422. Patent stills are not often used in the Midi, 16434, 16435. Description of the stills used in witness's district, a photograph being afterwards sent in, 16464–16466, 16484. The brandy is generally run at about 52, 16467, 16468, 16476–16479.

COTTON, Alderman W. F.—

Residing at "Hollywood" Dundrum, County of Dublin, 2954, he is alderman of City of Dublin, 2955, justice of the peace for the County of Dublin and deputy lieutenant, 2956, also director of Hibernian Bank, a director of the Dublin United Tramways, and chairman of the Alliance and Dublin Consumers' Gas Company, 2957. Is an Irishman, and has lived in Ireland all his life, 2958, 2959.

Witness has no interest in whiskey distilleries, 2960, though fifteen years previously, he had an interest in a distillery in Dublin, 2986.

Compulsory bonding: Witness in favour of this. Suggests five years, 2969–2974, certainly not less than three years, 2980, this being the general impression, 2981. Considers whiskey injurious under three years, 2982–2985.

Definition of Irish whiskey: Witness would restrict this term to pot still made from malt, barley and percentage of oats, 2962, 2976, which prohibition would not inconvenience the public, 2967–2968.

Blending: Witness is opposed to a mixture of pot and patent still, he does not object to a pot still blend, 2963–2965.

Labelling: Witness considers labelling of age and materials advantageous to public, 2977–2979.

COWAN, Mr. Archibald—

Is senior partner of Archibald Cowan, Mason & Co., Leith, wholesale wine and spirit merchants, 4568. Entered into business fifty-eight years ago with John Gray & Sons, Dalkeith, 4569, 4570, 4585; was cashier, &c., for five years, 4587; has been partner for thirty-five years of Archibald, Aikman & Co., general grocers and whiskey merchants, Edinburgh, 4586–4589. Does small trade in Irish pot still, patent still and blended spirits, 4661–4665.

Pot still whiskey: Witness draws his supplies from Balmenoch Distillery, Islay, Ross-shire, 4571, 4575, 4593, spirit formerly sold pure, 4576, 4594, at customers' desire, 4577. Demand for pure pot still spirit small, 4599.

Patent still whiskey: First produced about 1845, 4641, 4642, by Haddington Distillery, 4643, 4644, principal producers were Seggie Distillery, on account of superior grain of that district, 4645. Witness has used Haddington spirit, 4571–4574, also Cambus and Seggie, 4590–4592. Large demand for patent still spirit in Glasgow and Edinburgh among working classes, 4646, 4647, 4649, effect of Islington case to increase this demand 4632, 4670–4674, in Scotland, 4633, 4634. Witness buys only new spirit, 4666, has no objections to calling patent still spirit "Grain Whiskey," 4675, 4676.

Comparison between pot still and patent still whiskey: Demand for patent still spirit formerly nine times as great as for pot still, 4578, demand for pot still, or "Highland" spirit, then very small, 4597–4599, 4600, as this was too strong, 4579, and too heavy, 4606–4608, patent still spirit lighter, 4605, 4677–4680. Buying price for patent still spirit about 10d. per gallon below pot still, 4580–4584, 4595, 4596, selling at 2s. per gallon below pot still spirit, 4601. Difference in price to consumer about 1d. per half gill, 4652–4660. Patent still spirit lacks flavour of pot still spirit, 4609. Consumer's taste varies with locality, 4610, patent still spirit preferred in the South, 4610, pot still spirit in the North, 4611–4613, 4617; witness considers this due to custom, 4612.

Blending: Has been practised about thirty years, 4651, witness prefers blended spirit, 4602, 4624, in proportion of two parts patent still to one part pot still spirit, 4602, 4604, considers this blend is the best whiskey obtainable, 4605, and is the favourite blend on the market, 4624, usually blends spirit from two or three pot stills and from two patent stills, 4603. Trade at present principally in blended spirits, 4614, 4631, 4632; largest buyers are publicans, who buy pure spirit and blend themselves, 4650, blends vary, 4615, according to taste, 4616, but are of constant types, 4635–4640. Spirit sold chiefly in casks, 4618, with specific labels, 4619–4623, character of spirit varies with different distilleries, 4625, 4626. Public usually indifferent to blend or distillery, 4627. Witness is opposed to standardisation of blends, 4628, and considers age limits unnecessary, 4629, as new spirit

has not been proved unwholesome, 4630. Export trade with Australia and India consequent on blending, 4687.

Maturation: Selling value of spirit increases 3d. per gallon per year, 4667, corresponding rise in retail prices, 4668. Cost per gallon for spirit of twenty years 11s. 2d. in bond, 4682. Shrinkage in strength, 4669, 4682, and quality consequent on maturation, 4669. Spirit stored in sherry casks, 4681, 4683. Witness does not colour the spirit artificially, 4684–4686. Declaration of age in Australian trade, 4688, does not export new whiskey to Australia, 4689, 4690.

COWIE, Mr. Alexander Mitchell—

Is proprietor of the Mortlach Distillery, Glenlivet, which is in the Speyside district, and has been a pure malt distillery since 1823, 8609–8612. He represents the North of Scotland Malt Distillers' Association, 8613, 8614. In the district covered by the Association there are eighty distilleries, forty-two of which are in the Association, 8615–8617. Witness sells his product pure to dealers, but chiefly to blenders, 8647–8652.

Before the Spirit Act of 1821, distillation was carried on in every farm-house, in small crude pot stills, 8618–8624. After the Act, smuggling commenced, and distillation was carried out at places called "Bothies," 8624–8627. The product was not all used for home consumption, but in 1821 an extra rebate was given for whiskey used for this purpose, to persuade the illicit distillers to take out licences, 8628–8633. There has been a greater demand for Glenlivet whiskies since 1880, 8634. Originally all these whiskies were malt pot still, but the change to patent still, which began before the Coffey still in 1831, was greatly increased by its advent, 8635–8638. Pure malt whiskey is drunk more in the Highlands than in the Midlands and in the Lowlands, chiefly owing to climate, etc., 8721–8725.

Definition of Scotch whiskey: It is a spirit made in Scotland, which contains a mixture of malt and grain whiskey in such proportions that the whiskey shall have the characteristics of pot still malt whiskey, 8868. A blend would be permissible, as long as the blend was according to the above definition, 8780-8796. Witness thinks that Scotch whiskey ought to be sub-divided into Highland malt whiskey, Lowland malt whiskey, and Scotch whiskey, 8880. Highland whiskey would be the finer whiskey, 8780–8783. Malt is essential in Scotch whiskey, and this may then be diluted by the addition of grain spirit made in Scotland, or water, 8862–8868. Witness's Association suggests that a blend of 50 per cent. pot and 50 per cent. patent should be called Scotch whiskey, and that the Revenue should issue—as they have facilities for doing so—a special permit for this. Witness admits difficulty of fixing this standard, but thinks it would be sufficient protection, 8679–8713, 8828–8845, 8952–8963. A Reference Board should be appointed to settle this question, 9041, 9042. The chief characteristic of the definition must be the flavour, 8828–8843. Pot still whiskey is defined as a whiskey made from malted barley, in a still heated by direct fire, 8854. Witness is not conversant with Irish whiskey, 8855–8859.

Patent still spirit: Witness thinks this, or a blend with a large proportion of it, is mawkish and flavourless, 8726–8735, and should not be called Scotch whiskey, 8748–8750. Mr. Drysdale, representing the Distillers' Company in 1891, referred to patent still spirit as a "blending dilutant"; now Mr. Ross, representing the same company, says it should be called Scotch whiskey, 8736–8741. This Company advertised Cambus whiskey "without a head-ache in a gallon," inferring that it is healthier than pot still spirit or a blend, 8742–8745. After the Islington prosecution, it was advertised as "whiskey," whereas before, it was called patent still spirit, 8746, 8747. If sold pure, patent still spirit should be marked "Scotch grain whiskey," 8797, and witness would limit materials to cereals, 8860, 8861.

Maturation: Although patent still spirit improves less with age than pot still, a three years' limit of compulsory bonding would be advisable for both, as in both cases the value increases with age, 8752–8778. Quite new whiskey is pleasant to taste, but after a week it has a nasty flavour and smell, 8756–8761. It is quite drinkable at five or six years of age, and the period of improvement after that varies according to the original body of the whiskey, 8755–8767. There is 2½d. per gallon more loss in bond in pot still than patent still, 8900–8903.

Exportation: It would be very damaging to export trade, if a mixture of British and foreign spirits were allowed to be exported as Scotch whiskey, though it is pointed out to witness that this cannot be done at present, 8977–8999. Witness wants the Excise authorities to give a certificate confirming the age and strength of exported whiskey, as stated on the cask, 9000-9011. The age put on in distillers' bonded warehouse is the minimum age, and witness only asks that this should be certified, 9012–9040. In the case of blends, witness thinks the age marked should be either the average age or else the age of the youngest component, 9024, 9032–9034. Witness thinks that a different coloured permit should be issued by the Excise for Highland malt whiskey, grain whiskey, and blended whiskey, 8668–8680.

Blending: This is held to be beneficial both to trade and the public, although witness thinks there is no difference in the health effect of blend or pure malt, which is quite as mild if matured, 8653–8657, 8884–8890. Interference with good-class blends would be injurious to the trade and to the public, 8665–8667. Price of blend is to a certain extent indicative of the proportion, as pot still is much more expensive than patent still, 8714–8717.

Highland malt whiskey: This is pot still product, made from pure malt in the district north of a line joining Stonehaven to the Mull of Kintyre, 8639–8645, 8881, 8882, 8883. Witness thinks that direct fire heat is of great importance in manufacture of Highland malt whiskey, and quotes Morewood and also the Report of the Select Committee of 1891 in this connection, 8818–8825, 8914–8931. He was unaware that experiments had shown that the same effect was obtained with steam in breweries, 8932, 8933. Two Highland malt distilleries use steam, 8936–8943, and witness thinks that it is used in the Lowlands, 8825, 8873–8875. Peat fuel is essential for drying the malt in Highland whiskies, 8908–8912. Some Lowland distilleries use it and some do not, 8913. No Line arms are used in Highland distilleries, and the purifiers used have no fractionating effect, 8826, 8827, 8944–8947, although there must be some fractionation in the second distillation, 8948–8951. Most Highland malt whiskies cannot be bought pure in London at 12 years old; witness thinks it is better then pure than blended, 8884–8890. Distillers have to get special licence to bottle, which is done under the supervision of the Excise. Witness would like a right to label it "Bottled at Distillery," or "Bottled in Bond," 8891–8899. Highland whiskies are subdivided according to the quality and style of the whiskey, but are not blended together, 8658–8664.

Health: Witness thinks there is notable difference between the medicinal effects of pot and patent stills, due to the large amount of bye-products in the former, which has more the nature of brandy, 8798–8811. As regards the intoxicating effect, this depends upon the alcoholic strength, and if this were the same, it would be identical in both, 8812–8814. Witness does not think absolutely new spirit is deleterious, and has seen many healthy old people at distilleries who drank it, 8815–8817, though after six months it became difficult to digest, 8846–8848. It is impossible that any "ethery whiskey" could be sold, 8849–8853. This is the result of damaged grain being used, 8964–8975. The light Danubian barleys do not give sufficient body and thickness to Highland malt whiskies, though some distillers use them, 8975, 8976. Malt whiskey can be more diluted with water than grain whiskey, 8869–8871.

CRAIG, Mr. H. C.—

Is a director of Dunville and Co., Ltd., wine and spirit merchants and blenders, Belfast, 9935, 9937–9939, 9955, and of the associated firm of William Dunville and Co., Ltd., distillers, 9940–9945, which was founded in 1869 to evade the Excise laws. They have been established as dealers for 100 years, 9936, 9941, 9946–9952, 10209–10211. They own two pot and three patent stills, 10223, 10224; the production of the latter being the more extensive, 9953, 9954.

Derivation of the term whiskey: Regarding this, witness agrees with Mr. Keith's evidence, but thinks the word "whiskey" is English, 9994–9997. In the

Irish Act of 1735 and the Scotch Act of 1736, whiskey is referred to as "aqua vitæ," 9981–10004. The earliest mention of the word "whiskey" is in a poem of Burns of 1785, 10005–10012. It occurs throughout the Inland Revenue reports of 1786–1805, 10013–10018. In his childhood, "Spirits" was universally used, 10019–10024, whilst in the Commission of 1799 the terms are used synonymously, 10025–10028. Advertisements in the "Belfast News Letter," 1813, refer to company's products as "Old Corn Whiskey," probably implying a mash of malted grain and oats, 10115–10121, and in 1814, three advertisements of "Whiskey," 10122–10124, and in 1828, of a quantity of "Old Malt and Grain Whiskey"; stock books of 1831 also show "Malt Whiskey" and "Grain Whiskey," 10124–10136. Witness surmises from this, that the intention was to get a palatable drink, and almost anything was used, 10137, though the still used would be a pot still, 10138.

Definition of whiskey: According to witness, it is an alcoholic drink made palatable by direct distillation, from almost anything or anyhow, 10029–10034, 10040, 10075–10077, 10079, 10081, 10082, 10084, 10307. For a period of two years during the Napoleonic wars, a law was in force prohibiting the use of any cereals, 10050, 10085. Witness uses "direct distillation," to distinguish the process from rectification, 10308, 10309, and is guided in his opinion by past history and practice, when spirits were judged by their stimulating properties, 10310–10315. Large quantities of whiskey have been made without malt or grain from potatoes, turnips and treacle, though not within the last forty years, 10035–10038, 10048–10051, 10080, 10085, 10305, 10420, 10421. Witness would like a return to the freedom of distillers to choose their own materials, 10306. In the case of legislation, he would adopt a cereal definition, such as Mr. Walter, though as an individual he prefers the wider and more progressive, 10039–10044, 10052, 10057–10060, 10083, 10316, which is towards flavour rather than stimulus, and hence is governed by public taste, rather than logical definition, 10317–10327. A legal definition should leave scope for distillers to develop process on their own lines; he suggests cereals as a basis, irrespective of the method of conversion; product to be judged by flavour, 10354–10370. Scotch and Irish whiskies were evolved by public taste, and are not geographical, the characteristics of both being procurable in either country, 10298, 10300, 10328–10339, 10401, 10402. It should, therefore, be legitimate to sell as Scotch whiskey the company's Belfast pot still whiskey, made from Scotch malt, malted Black Sea barley, 9958, 9959, 10189–10198, 10281–10286, 10291–10299, 10302, 10303, and conversely with the blends of Glasgow grain and Irish pot still, 10207, 10208, 10212, 10216. Since the Islington case, however, the company have bought Scotch patent still for blending with Scotch malt, 9960, and have discontinued the manufacture of Irish pot still for Scotch blending, 10287, 10288. He considers it immaterial where whiskey is made, 10199. The impossibility of detecting the origin of blends should also exclude legislation, 10182–10188, 10389–10397, 10417, 10433–10435, which limited breadth of materials and the use of local names, though as a trader, he would be glad of the protection, but does not see how it could be administered, 10436. He would leave the whole question open, holding that, provided the spirit is pure and wholesome, the details of production should not be interfered with, 10398–10400. Witness thinks the best classification is under the heads of accepted brands, 10353. As at present made, malt and cereals are necessary factors in making whiskey, 10045–10047. Witness places German turnip spirit on the same plane as all Scotch and Irish spirits as regards flavour, but cannot himself distinguish between them, and is confident that they would pass in the trade as patent still whiskey, 10061–10074, 10161, 10202, 10301, 10401, 10402. The chief constituents of whiskey are alcohol and water, plus the natural flavour, and it is the direct result of distillers' endeavour to produce alcohol; the local flavours being merely the result of accident, 10422–10432.

Illicit still whiskey: Formerly more than half the spirits consumed were supplied by smugglers, 10095, the self-condemned Excise laws being the cause of this, 10094. Loftus' Inland Revenue Almanac for 1861 attests the general superiority of the preference for the illicit article, on account of the forced distillation of licensed distillers engendered by the stringent laws, 10096, 10102–10105. An Act of George II. in 1760 leaves distillers open to employ any kind of grain, 10106–10111.

Pot still whiskey: The report by Samuel Morewood, an Excise officer, in 1823, states that a quarter malt was then required by law, 10086–10089. This probably refers to the Act of George IV., 10090, which provided a bounty on the use of an all-malt mash, 10091, 10092, though this was previously more in Scotland, 10097–10101. Experiments were also sanctioned in 1858–1859 by the Inland Revenue, for the use of rice—probably by acid conversion, 10106–10114.

Patent still whiskies: These have always been designated by the company as "Grain Whiskey," 10205, 10206, 10139–10144, and witness knows of nothing injurious in them, 10160, 10437, 10438. At the time when the company were purchasing patent still whiskey in Glasgow, about 1865, molasses and sugar were undoubtedly used, though their purchases were from grain only, 10213–10221. The use of molasses has now entirely passed away in Ireland, 10222. The erection of a patent still plant is costly, 10240, 10243, and there is no secrecy regarding its use, 10241. The middlemen are generally experts, and the publicans better informed than thirty years ago, 10242, 10249–10255. The tendency of the trade since 1869 is slightly towards the consumption of more patent self-whiskey, 10231–10234. Witness has but little knowledge of compounding trade, or that in essences, etc., 10403, 10404. Irish and Scotch grain spirit is not sufficiently clear for compounders' purposes and German spirit is used, 10405–10407; although witness is able to discern only a slight difference between patent still whiskey and alcohol, 10410–10415, but does not think that ordinary German spirit would pass the standard of ethyl alcohol, 10407–10409. Patent still spirit is largely sold to chemists, 10415.

Comparison between pot and patent still whiskey: The company have always employed the same materials (with preponderance of malt in the pot) in both pot and patent stills, 10145–10151, and both have always been designated "Irish Whiskey," 10200–10204. The patent still produces a thinner and cleaner article, which is cheaper and more profitable than pot still, 10152–10156, and has less flavour, 10162–10164, and is best used in a blend, 10165–10176. The English trade commenced about 1850–1860, fostered by spread of railways, 10225–10227. The spirit then drunk was gin, which approximated to Irish rather than Scotch whiskey, and consequently the trade fell chiefly into their hands, 10228–10230. In selling, the company make no declaration of constituents, but sell by known standard, 10256, 10257, 10386, 10387. The publicans are aware that original price for pot and patent still differs, and extras for age, etc., are added, 10258–10260. Cheapness is largely a matter of distillers' competition, 10261, although the class of whiskey kept by publicans is lower now than formerly; this does not necessarily imply a different proportion of malt, 10265, 10266. A high class of "Specials" is generally obtainable, 10262–10264, 10273. Witness does not consider the retail system is greatly affected by tied houses, 10274, 10275, 10278–10280. The company do not sell low-class whiskey, 10276, 10277.

Blending: The company only blend and sell Irish whiskies of their own distillation, 9956, and their trade is chiefly in these, which are all proprietary, 10157–10159, 10235–10237. It was to this end they built their distillery, 10239. Their foreign and English export trade is extensive, 9985–9988, and they still export to Scotland, though less than formerly, 9989–9993, 10340–10352. They also blend a small quantity of Scotch spirits, 9957, 9961–9984. Witness knows of no reason why blends should not be called whiskey, 10177, as they have been so sold since their introduction, 10178–10181, and he entirely approves of them for the purposes of trade and consumption, 10238. The consumer is generally ignorant regarding pot and patent still whiskies, 10239. The company have a small demand for special liqueur whiskey, which differs in age and proportion matured in sherry cask, 10268–10271, 10380–10388, and the superior flavour is dependent on this, 10272. The company endeavour always to blend with whiskies of the same age, 10371. A poor quality of blend implies low percentage of pot still, 10377–10379. They blend largely outside bonded warehouses, 10416, and would strongly oppose, on impersonal grounds, any modification of the trade privileges regarding the addition of colouring materials, etc., 10418. Witness

knows of no blending of British and foreign spirits in bond for exportation, 10419.

Maturation: Bottling in bond has greatly increased during the last fifteen years, 10267. The patent still product improves, but not nearly so much as the pot still, 10372–10376. New spirit is frequently preferred in the working class neighbourhoods, 10439–10441. Witness regards bad effects due to excess of alcohol, rather than to the bye-products, 10442, 10443.

CURRIE, Mr. R. C. W.—

Is Managing Director of Tanqueray, Gordon and Co., General Rectifiers and Cordial Makers, 13597–13600.

Gin: A pure alcohol, highly rectified to a certain point, containing very few bye-products, made solely from corn and distilled with juniper berries and other herbs, the restriction to corn applying also to foreign spirits, 13601–13608, 13613–13616, 13624, 13627–13630, 13640, 13641. Witness does not know if gin can be made any other way, but he would not call the product gin, 13609–13611, 13617–13619, 13625, 13626. Sweetened gin means the addition of sugar, 13620, 13621.

Plymouth gin: This is made in Plymouth by one distiller only, having a special flavour of its own, 13622, 13623.

British and foreign compounds: Witness's firm makes cordials, but does very little business in foreign liqueurs, 13631, 13643. The British products are known as cordials and the foreign as liqueurs, 13632. The basis of the cordials is highly rectified spirit, 13638, 13639. No restriction on descriptions given, materials used, or sale, nor does witness think this necessary, 13633–13637, 13642, 13644, 13645. Ginger wine is not considered a cordial, 13655–13657.

Stone's British wine contains no alcohol, 13658.

Excise: Witness does not wish the clause allowing sweetening in bond to be repealed, and believes this is the general view of rectifiers, although he has no objection to the word "Distiller" being struck out, if the distillers desire it, 13646–13653.

Maturation: Unnecessary, 13612.

Recalled—

Definition of British brandy: This is a British compound spirit, partaking of the flavour of foreign brandy, 17272, 17273. Brandy is made of corn spirit, 17278. A certain amount of foreign brandy, or of essence, is added, 17285, 17286.

Flavour of brandy: The standard aimed at is Cognac, 17277. The ingredients used are fairly numerous, 17288. He would not voluntarily supply information regarding the nature of the compounds, 17288–17293. He thinks that artificially flavoured spirit can be of the same nature and flavour as wine spirit, 17337, 17338. The flavouring and essences he uses are of the best possible quality, 17350–17355.

Description of British brandy: "B.B." is marked on the permit as well as on the invoice, 17300–17305. It is very difficult to distinguish British brandy from Cognac, 17311. It would have an injurious effect on the trade if British brandy confined to that name, 17324. Besides British brandies, there is imported spirit of a very similar kind, such as Hamburg brandy, 17314, 17315. Witness regards the ageing of compounded spirits as unnecessary, 17327. In any case, foreign and British spirits should be treated alike in this respect, 17328. British brandy is not at all deleterious to health, 17344.

DALY, Mr. Dominick Justin—

Is Vice-President of the Cork Chamber of Commerce and Chairman of Messrs. M. D. Daly & Sons, Limited, wine and spirit merchants, 2207–2209; with wholesale trade and one off-licensed house, 2213. Firm established hundred years, 2211. Witness thirty years in trade, 2212; no interest in any distillery, 2214. Two pot distilleries and one patent still in Cork, 2275–2279; knows nothing of their products, 2280.

Irish whiskey: Witness's chief trade is in this, 2223, and thinks it should be made in a pot still, from malted or unmalted barley, with small addition of some Irish cereals and Irish water, which gives it a particular flavour, 2215, 2216. Patent still spirit may be "Whiskey," but is not "Irish Whiskey," whether blended or pure, 2218, 2221, 2227, 2229–2231, 2251, 2252, 2293. Irish whiskey is mellow and full-flavoured, 2222, and is distinct from "Scotch," 2250. Witness buys it from distilleries chiefly for bonding, 2236, but uses some for blending at two or three years old, 2236, 2237; cost from 4s. to 5s. per gallon, 2238; Sold at about 18s. 6d. 14 to 15 over-proof and duty paid, 2242–2244.

Scotch whiskey: Witness sells very little of this, 2284; buys pure pot still in bottle from distillery, 2285, 2286.

Blending: Witness does not approve of this, but blends to meet competition and demand by retailers for cheaper whiskey, 2224, 2225, 2294–2297, 2300. Consumer still pays the same price, 2298, 2299. Witness sells a blend of 80 per cent. patent and 20 per cent. pot still whiskey, 2226; calls it "Whiskey," 2228, 2281–2283. Blends sold at from 9s. to 16s. 6d. a gallon, duty paid, cost depending on strength, 2240, 2241, 2245–2247. Witness himself blends, 2270; thinks blending disguises flavour of new whiskey, 2271, which can therefore be used younger than when pure, 2272–2274. Customers would know difference between a blend and Irish whiskey, 2283; sold chiefly in casks, "D & S" written on top, but no notice given of contents, 2287–2292.

Patent still spirit: Witness regards it as almost pure alcohol, 2217, 2222; buys it over-proof, from the North for blending, 2232, at 1s. 4d. to 1s. 8d. per gallon, 2233, 2234, 2239. Customers know difference between this and Irish whiskey, 2218. Witness thinks all patent still spirits have same flavour, 2249.

Maturation: Witness is in favour of compulsory bonding of pot still whiskey for two or three years, 2253, 2260; for reasons of health, 2254, 2255, 2268, and because of the great improvement caused, 2255–2258, 2261, 2266, 2267; the disagreeable bye-products disappearing, 2262, 2268, 2269. Very little new Irish whiskey sold, 2259, but witness does not know that this would be injurious, 2263–2265.

Witness hands the Commission a circular, sent to every holder of a ten-guinea wholesale licence, by a large firm of wine and spirit merchants, 2447–2449. This circular first states: "Whiskey blended Scotch," giving name of blender and price, then, "Self-Whiskies," "Jameson's," "Power's," &c., 2450; then, "Irish Whiskey" distilled by Irish Whiskey Company, 1s. 10d. per gallon. "Free on rail at Belfast, Liverpool and Glasgow" might be taken to mean that "Irish Whiskey" is made at either of these three places, 2451–2454; whether this is so, or not, price shows it is patent still spirit, 2455.

DAWSON, Mr. J. G.

Is managing director of Messrs. John Gillon and Co., whiskey blenders, 8052, 8055–8057, old-established firm, 8053, 8054. Representing Edinburgh and Leith Wholesale Wine and Spirit Dealers' Association, 8052.

Witness's definition of whiskey: Should be made from 25 to 30 per cent. malt and other cereals, 8058–8060, 8145–8147. To be called Scotch whiskey, it must be made in Scotland, 8097, 8098, 8194, 8195. Grain whiskey made in a patent still, also Scotch whiskey, 8144.

Compulsory bonding: Witness personally has no objection, 8084, 8085. Suggests on behalf of Association two years as an improvement (possibly three for pot), 8067, 8068, 8086, 8087, 8156–8158. Realises that whiskey would thus compete unfavourably with gin, 8088, 8092. Suggests adoption of similar certificate of age as in Australia, 8093–8098.

Blending: Object is to produce a good drinkable cheap whiskey, cheapness produced by addition of grain spirit, 8065, 8066. Increased demand recently for Scotch blends in England, 8117–8120. Firm uses several blends. This always adhered to in mixing, if satisfactory, 8111–8116. Witness objects to labelling composition of whiskey, which would lead to fraud and possibly cause restriction in use of whiskies, 8128–8138, 8172–8176. Lowest proportion of witness' firm 10 per cent. malt, 90 per cent. grain, 3s. per gallon in bond; highest, 10 per cent. grain, and 90 per cent. malt, 8070–8075. Firm's blends have different names, but no proportions given, 8177–8180. Witness objects to notifying proportions for export trade, as it would destroy this, 8099–8101. A good retailer judges from flavour and price charged the approximate proportions, 8102–8106. Large export trade, entirely blends, increased since 1886, 8107–8110. If new whiskey demanded, a blend is supplied, 8069.

Analysis: Witness against this. Disagreement of chemists' analyses of firm's blends. Bye-products vary frequently in distilleries, 8159–8161, 8196–8200. Standardisation of amount of malt in Scotch whiskey therefore difficult and misleading. Suggests leaving it to trader, 8201–8214.

Malt whiskies: Should not be drunk alone, especially best malt, 8061–8064. Those exported were unsaleable. Too heavy. This corrected by addition of grain spirit, 8077–8079, 8125–8127. Inquiries for malt whiskey after Islington case. Returned with one exception, 8080–8083, though supplied at higher price than blends, 8153–8155.

Witness has little knowledge of Irish whiskies. Different flavour of Irish patent still from Scotch, recognisable by any whiskey drinker, 8188–8193. Description of blend of Irish and Scotch whiskey as either Scotch or Irish whiskey, dishonest, 8167–8171.

America formerly objected to whiskey supplied by witness's firm. This now admitted under certain conditions, 8181–8187.

Witness's father used grain, cereals, malt and barley in Scotland in a pot still. Does not know date. It was a Lowland malt distillery, 8130–8142.

Firm sometimes sells pure grain, 8076.

Witness says grain whiskey is sometimes bonded longer than malt for certain light blends, 8121–8124.

Witness has no objection to Scotch whiskies being mixed in London, 8162–8164. Would not restrict London wine merchants mixing duty paid spirits, 8165, 8166.

DELAMAIN, MONSIEUR JACQUES—

Represents Roullet and Delamain, Jarnac, brandy merchants and exporters, 15631–15633, the export trade being mainly a bottle trade, 15634.

Witness defines "brandy" as the produce of the distillation of wines, 15636, 15701–15711, 15726, 15727, and "Cognac brandy" the distillation of the wines of the Cognac district only, 15636, 15722–15725, though formerly "brandy" meant "Cognac brandy," 15637, 15638. Eau-de-vie may be a blend of any spirit containing a certain proportion of grape spirit, 15728–15733, 15754, and, in witness's opinion, should not be regarded as brandy, 15734–15744. He considers the product objectionable in flavour and possibly injurious, 15744–15753. Spirits of inferior quality often wrongly described as brandy, and without any guarantee whatever, should not be allowed to be sold on the British market as brandy, 15646–15652.

Cognac brandy: The present system of acquits is a good guarantee, 15639, 15692–15696; but under the new law of delimitation, Cognac will be more protected, 15640, 15643; it would, however, be still more guaranteed if kept in separate "chais," 15640–15645. Witness considers English measures to protect brandies have been helpful, 15697–15700. The average quantity per annum of Cognac distilled is seven million gallons, 15662, 15716–15721. of which about two and a half millions is sent to England, 15660–15666, 15712–15715. Blends of Cognac are labelled with name of firm and "Cognac," but the word "Cognac" is not used if the blend be of pure grape brandy and Cognac brandy, 15667–15681. Discussion, 15682–15691.

Brandy improves with age especially in England, owing to the climatic conditions, 15653–15659, though new brandy is not injurious, 15655. Witness does not recommend compulsory bonding, especially for Cognac, 15657.

DEWAR, SIR JAMES, F.R.S.—

Is late President of the Society of Chemical Industry, Past President of Chemical Society, Jacksonian Professor of Natural and Experimental Philosophy at Cambridge, and Professor of Chemistry at the Royal Institution, 10838, 10839. Witness has no direct or indirect interest in any distillery or brewery, or in the sale of their products, and now appears as an independent witness; though he was retained for the defence in the Islington prosecution, 10840–10843. Witness has been interested in the scientific side of distillation since he was assistant to Lord Playfair in Edinburgh, 10844–10848.

Chemical history of whiskey: Witness quotes extracts from two manuals on chemistry, etc., about 1848, which state that "Corn Spirit" made in the United Kingdom was known as whiskey and derived its peculiar flavour from malt, which was dried by peat or turf fires, 10849, 10850. A well-known writer in 1866 describes many methods of distillation in different stills (including patent still), and always refers to product as malt whiskey, when produced by action of malt, whether containing raw grain or not, both in patent and pot stills, 10850–10857. He also quotes two extracts, which have special reference to the extraction and character of fusel oil, 10858.

Scientific definition of whiskey: "It is a generic name given to the varieties of ardent spirit as prepared in Ireland and Scotland from the distillation of a fermented infusion of grain, technically called a wash," 10861. This definition certainly means the use of malt for saccharifying the grain, though witness would not exclude any advance in scientific knowledge, which would produce the same result, such as the new amylo process, 10862–10870. Definition of Irish and Scotch whiskey should be geographical, 10871, and products made in the same way in England would be English whiskey, 10872–10876.

Patent still product: Witness has used "Cambus" for 30 years and likes it exceedingly, and has found no deleterious effects from it, although he has extracted bye-products and taken them "neat," 10877–10884. Witness regards these as generically the same type in all whiskies, though the body containing the fine aroma only comes from malt, 10924–10926. Furfural is derived from wood in which the whiskey is matured, 10927, 10928. Whiskey used by witness is about six years old, and is usually matured in sherry casks, 10934, 10935. He thinks patent still product should certainly be called whiskey, though perhaps grain whiskey, 10890, 10936–10938. Large quantities of it are sold pure, 10888, 10889. Witness does not know much about Irish patent still spirit, though he thinks it is distinct in taste from Scotch, in much the same way as Irish and Scotch pot still whiskies differ from one another, 10944–10949. Witness has always known term grain whiskey (whether "raw grain" or otherwise), to apply only to patent still product, 10962–10966. A small variation in the working of the patent still will produce a great difference in the product 10898–10902, 10906, and though witness has never seen it done, he thinks an article identical to pot still product could be produced, 10903–10905. Object of Coffey was to produce same product as pot still by a scientific one-distillation method, 10960, 10961.

Synthetic whiskies: These can be produced by process of "refuselation" or putting back of higher alcohols to reach any standard which might be fixed, and this would certainly be done if such a standard were made. Witness hands in samples, 10907-10921.

Fractionation: Witness has no doubt that this takes place in pot still distillation. Principles of two methods are exactly the same, although more crude in pot still, 10892–10897, 10959, 10960. Explanation of fact that feints when put back do not overtake distillation, is that they are lost in spent lees, 10955–10958.

Maturation: This is much greater in dry atmosphere than in a damp one, 10932. Some American experiments by Messrs. Crampton and Tolman were carried out, also under these two conditions, and witness agrees with their conclusions—they find the equilibrium was reached at about five years, that volume of whiskey diminished, etc., 10967–10978. Although witness thinks bye-products alter, he does not think the whiskey becomes less deleterious, as there is nothing of the sort present from the first, 10933, 10954; the aroma is, however, immensely improved, 10952, 10953, The amount of acid and esters increases with age, 10940–10943. Effect of American use of charred casks is to add matter dissolved by the whiskey from the charcoal, 10978, 10979. Witness has no knowledge of use of shavings to assist maturation, 10980, 10981.

Witness does not think that use of direct fire heat (instead of steam pipes) in pot still is an essential part of the process, 10950, 10951.

DIXON, PROFESSOR WALTER ERNEST—

Is professor of pharmacology and materia medica at King's College, London, and assistant to the Downing professor of medicine, Cambridge, 11117, and is aware of the change which has taken place in the production of whiskey, which is not appreciated by doctors, 11118. 11119.

Bye-products in alcohol: Witness considers that a greater effect is produced by the administration of spirits containing these than by pure alcohol: effects of alcohol containing these bye-products:—(1) Produces a feeling of warmth and comfort, 11123, 11150. (2) Has a stimulating action on the digestion and increases saliva, 11124–11126, 11146–11147. (3) Stimulates respiration, 11129, 11148, 11149. (4) Flushes the face, 11130. Pointed out that this not in agreement with Dr. Stockman's views, 11131–11133. (5) In case also of chloroform containing 1 per cent. of ethyl chloride no irritant action is produced as is the case with acetone chloroform which does not contain this, 11129, 11140–11145. The power of these in spirits on the body has never been thoroughly experimented, 11133, witness thinks it might be done with advantage, 11151, and would be quite feasible, 11152–11154. He would be willing to give his ideas about the lines on which these experiments might be worked, 11159, but thinks it advisable that the Commission should have its own definite evidence. The subject of the experiment should be a man who is not used to drink, 11155, 11156, and would not know the difference in whiskies, 11157, 11158.

Witness regards flavour as one of the most important points to consider as so many drugs owe their action to flavour, 11136, but the presence of this in whiskey destroyed its use in certain experiments by Dr. Rivers, 11137, 11138, which were not to test the effect on bodily strength of whiskey but of alcohol, 11139.

Cheap whiskey: Witness thinks this is perhaps less intoxicating as it may contain less alcohol and certainly fewer bye-products, 11119, 11120, which though not toxic themselves add to the toxic power of whiskey, 11121, 11122.

Labelling: Witness thinks this would be a guarantee to the buyer that he is getting what he asks for, 11134, 11135, but could not suggest a standard for this, 11135.

Witness found that the percentage of error as to whether, judging by taste, an unknown sample was patent still spirit or pure alcohol was practically 100, 11123.

DOOLAN, Mr Thomas—

Is a wine and spirit merchant, Waterford, with connection in South of Ireland, chiefly retail but also wholesale, 2338–2342. He has been in the trade 28 years, four of which were in Scotland, 2343, 2344.

Definition of Irish whiskey: Product of malted and unmalted barley with addition of cereals indigenous to Ireland and distilled in pot still only, 2345–2347.

Patent still spirit: Witness would never allow this, or a blend, to be called whiskey, 2348, 2349, 2352, 2353, as it does not contain ingredients necessary to produce characteristics of whiskey, 2350, 2351, this being view generally held in Ireland, 2351, 2354, 2403, 2404. Witness thinks it is flavourless owing to lack of bye-products which are present in pot still, 2360–2365, and it is this deficiency which seems to induce a greater craving for it, or a mixture with a large proportion of it, than for pot still, 2366–2384. This mixture is sold in country districts of Ireland, 2385–2390. Witness has had complaints of it, but it is drunk because nothing else is obtainable, 2391–2403, and it is sold cheaply to publicans who make large profit by selling it unknown to customers as Irish whiskey, this being often done, and driving out Jameson's or other well-known pot still whiskey in country where there is no competition, 2405–2448.

Potheen or illicit still: Witness thinks that three distillations were used in this which was, and is, a pot still product, 2356–2359.

DOWNES, Mr. Robert—

Is Chairman of West Meath County Council, 2987, and member of Board of Agriculture, 2988. He is a farmer, though not a barley grower, with no distillery interests, and has lived all his life in West Meath, 2987–2993. His interest in present question is entirely from the agricultural point of view and agrees with views of Sir Horace Plunkett and Colonel Everard in this connection, 3004–3006, 3013–3016.

Definition of whiskey: A material made in a pot still from home-grown barley, 2994. This is the general opinion in Ireland, 2994–2997.

Patent still whiskey: This term was practically unknown in Ireland until present inquiry, 2999, 3000. Patent still spirit is often given unknown to customer for Irish whiskey, 3001–3004. Competition of patent still spirit militates against growth of barley in Ireland, 3007–3012, which witness believes would disappear but for the demand by Guinness's brewery, 3012.

Potheen or illicit still: This in a more skilful form of manufacture is probably Irishman's idea of whiskey, 2997, 2998.

DUNLOP, Mr. H.—

Represents Messrs. Boll and Dunlop, Rotterdam, 14592–14594.

Definition of Geneva, Hollands and old Scheidam: The product obtained by distillation in pot still from barley, malt, rye and maize, 14595–14599. The proportions of these materials are usually about equal, but witness would not make this compulsory, 14595, 14652–14662. The pot still grain spirit goes through three distillations before the final process. The whole mash is fermented and the still has no rectifying arrangements, 14640–14651. In case of old Scheidam, the spirit is kept for one or two years in an old wood vat before being distilled with juniper berries, while for Geneva or Hollands it is treated immediately and not matured, 14604–14639.

EVERARD, Colonel Nugent—

Is a retired Army colonel, 2886, Lieutenant for the County of Meath, 2887, Chairman of County Committee of Agriculture, Ireland, Member of the Board of Agriculture, Ireland, and is on Council of Royal Dublin Society, 2892.

Witness speaks not so much as a consumer of whiskey as in the interests of Irish Agriculture, 2888–2893.

Definition of whiskey: Witness would not restrict the production of patent still, provided it was called silent spirit or any name but "whiskey," as he considers the latter fraudulent, 2894–2900. The name Irish whiskey should apply only to pot still whiskey, 2901, 2902.

FERGUSON, Mr.—

Is Senior Inspector of Excise in the Australian Commonwealth for Victoria, 12850, 12851. Witness shows papers relating to Australian Tariff Commission, which also inquired into the question of whiskey and brandy, 12852–12854, 12943, 12944, 12991.

Duty on spirits in Australia: Higher duty on imported spirits, thus encouraging home produce. A lower duty is charged for pot still products, or any "similar process" yielding similar results; this includes the patent still process if so worked as to yield spirit of low alcoholic strength, 12872–12884, 12896–12902, 12912, 12918–12920, 12956–12963, 12965–12967. The Excise Tariff is founded on recommendations of the Commission, 12964, and has only been in force since October, 1906, 12968, 12969. If a "similar process" required further definition, a new Act would probably be framed, 12983, 12984, but the Excise have hitherto had no difficulty regarding this question, 12970, 12982, nor with the checking of strength, and it is so far the only thing taken account of, 12971–12982.

Whiskey: This has been manufactured in Australia for about 50 years, 12984, 12985, and is the staple spirit consumed there; mainly imported from the United Kingdom, 12855–12857, 12868, 12955. It is sold as "whiskey," without distinction, 12858, 12913–12916. Quality of imported whiskies not checked by the Australian Government, except for fitness for consumption, 12859–12864. Some Australian whiskey is made first in the patent still and afterwards passed through the pot still (possibly to improve the quality), though witness believes more patent than pot still is manufactured in Australia, 12886–12893, 12932–12936. Patent still spirit must be produced at less than forty per cent. over proof, 12937–12941.

Brandy: Defined by Excise tariff as distilled wholly from grape juice, 12870, 12871, 12874–12878, 12923–12927.

Gin: A good deal of both pot and patent still is manufactured in Australia, 12930, 12931.

Rum: Increase at present in manufacture of rum in Australia, 12953, 12954. Not much Jamaica rum imported, 12955.

Maturation: The Excise place a two years' age limit on all spirits, excluding gin, 12865–12868, 12871, 12908, 12928, 12929, 12945, 12946, 12985, though there is no guarantee from the British Excise, 12986. Witness does not think raw spirits should be consumed, 12988, 12989.

Imitation rums: Rejection of these by Excise as undesirable goods, 12903–12907.

Labelling: Blends need not be labelled as such, though a statement to this effect is made on entry, 12909–12911. A certificate may be given by Excise on request, 12947. Every bottle has a seal or label affixed by Excise, 12948–12952.

FERNBACH, Monsieur Auguste—

Is a Doctor of Science of the University of Paris, 15755, head of the Fermentation Department of the Pasteur Institute, 15756, Lecturer on the Fermenting Industry in the Paris University, and a member of the French Commission charged with drawing up regulations under the 1905 Pure Food Law, 15788.

The system of acquits protects up to the point where the spirit leaves the Excise control, 15759–15763, and is supplemented by the 1905 law, 15764–15767. The latter does not go into the question of the wholesomeness of spirits, confining itself to the question of definition, 15768–15770, 15820–15824. Witness describes course adopted in cases of misdescription, 15849–15851. Taste is the most reliable evidence, 15785–15791, aided by chemical analysis, 15786–15788, and the acquits, 15786, 15787. Chemical standard based only on amount of esters present in a spirit is unreliable; genuine Cognacs fall below the standard, 15792–15798, 15800–15802, 15805, 15806, 15848; discussion, 15815–15818, and witness hands in some data illustrating this, 15799, 15803, 15804. Chemical analysis is more helpful on the side of the known than the unknown sample, 15852–15854. Witness does not know what chemical effect maturation has on brandy, scientific investigation not having been extensive, 15812–15814, 15819. Researches and experiments (by Messieurs Dujardin-Beaumetz and Audigé, 15830, 15844) show that strongly flavoured spirits like Cognac brandy may be more toxic than ethylic alcohol itself, 15825–15833. Discussion, 15834–15847. Witness explains the benefit of the Certificate of Purity, a new measure not yet published, 15854–15860.

Production of brandies: Special brandies are produced in Armagnac and Cognac, the superiority of the latter being due to the special kind of wine distilled, also to the distilling process, 15572. Witness defines brandy as the product of the distillation of the wine, 15773, 15774, and Cognac brandy as the product of distillation of wines grown in the Cognac district, 15788. The mixtures are not injurious, the only difference being one of flavour, 15780–15784. Only the simplest form of still is used in the Cognac district, 15808, though unsuccessful attempts have been made to employ more perfect stills, 15807—5811.

GARRETT, Mr. W. H.—

Is Managing Director of Messrs. George Idle, Chapman & Co., Limited, London, sole agents in United Kingdom for Messrs. Cusenier (manufacturers of liqueurs and large vineyard proprietors and shippers of Cognac). The firm are also "compounders" of cordials and specialists in liqueurs, 14663, 14664, 14709–14712.

Liqueurs and cordials: "Liqueur" is the name applied to foreign products, while "cordial" denotes British manufacture. They are both flavoured and sweetened spirits, 14665–14668.

Manufacture of cordials: Witness's firm makes cordials by allowing the fresh fruit to remain in the particular spirit required for about six months, and then drawing off the liquid and sweetening, and perhaps clarifying it. It is then sold just as it is, and not made from a strong infusion rediluted with spirit, 14669, 14670, 14699–14708. Witness never uses essences of any description, and thinks their use ought to be restricted, 14670, 14674, 14675, 14731; he does not use plain spirits as the product is obviously not, say, cherry brandy when brandy is not used, 14669–14672, 14724–14728, nor does he think plain spirits flavoured with essences ought to be sold as brandy or rum, 14729, 14730. He would have no objection to stating materials used, but would object to giving proportions of these, 14717–14724.

Excise supervision: All witness's products have to be made from "duty paid" spirits, this being a great hardship owing to loss of interest during manufacture and maturation, 14693, 14694, 14742–14744. In France this is not the case, 14692. Excise inspector examines permits for import and export, and cordials after manufacture are re-bonded and a drawback of duty is given, the amount of which depends on strength of article bonded as compared with strength when duty was paid, 14732–14743.

Guarantee: Witness thinks that a guarantee should be given by manufacturers as to materials, etc., used in manufacture of cordials and liqueurs, 14671, 14691–14698. In case of brandy, Messrs. Cusenier ship this with the "acquit blanc" of the French Government, which guarantees that it is distilled only from wine in the particular district stated. Witness believes French system of inspection is very thorough, 14745–14757.

Compulsory bonding: Witness does not think a minimum age-limit is necessary in case of liqueurs and cordials, 14676–14678. In case of brandy a two years' limit is advisable from health point of view. Brandy matures more quickly in England than in France, but to compel the limit to be in British bond would hardly be advisable, 14679–14687.

Witness complains generally of the lack of encouragement and facilities given by the English Government to manufacturers and exporters of cordials, 14672, 14693.

Unenumerated unsweetened spirits: Extent of importation of these and their uses, 14758–14764.

GEOGHEGAN, Mr. William Purser—

Witness resides near Dublin, 2903, and has lived most of his life in Ireland, 2907; is a member of Congested Districts Board, 2904; director of the Great Southern and Western Railway, 2905; was for thirty-eight years chief brewer to A. Guinness and Co., 2906.

Definition of whiskey: Pot still made from Irish grains and other materials, 2908, 2909.

Definition of patent still spirit: Witness strongly objects to this being called "whiskey," being detrimental to pot still and prejudicial to Irish agriculture, 2913–2918, 2927. Would agree to its being called "grain whiskey," 2918.

Preference for pot still in Ireland, 2921, 2922. Prejudice against Irish whiskey amongst English consumers, probably owing to the inferior quality they obtain (possibly made in Belfast from maize), 2923–2925. Witness does not know Belfast taste in whiskey, 2926.

Witness has seen Dublin distilleries, and confirms the statement that Irish distillers buy the best materials procurable, 2910–2912.

GILBEY, Mr. Alfred—

Is director of W. and A. Gilbey, Ltd., 1942–3; wholesale wine and spirit merchants, 1944–5; who have agents all over the United Kingdom, 1946–1951; and distribute whiskey chiefly in bottles, 1952–1956.

Definition of Irish whiskey: Spirit distilled in a pot still, chiefly from malt with certain amounts of wheat, rye, oats, etc., to give it flavour and characteristics of Irish whiskey, 1957; grain used with the malt should be indigenous to Ireland, 1958. Witness objects to use of maize in pot still but not in patent still, 1960–1962, 1968, 1989, 2025–2030.

Definition of Scotch whiskey: Spirit distilled in a pot still from malt, 1986–1988, 2051, 2086–2093.

In Ireland, whiskey is often sold pure from the distillery, but in Scotland it nearly all goes to blenders, 2014–2016.

Description and guarantees of whiskey, 1998–2002. Varying prices according to whether "pure malt pot still" or blended with patent still, 2003–2006, 2104–2106. Value of patent still product is about half that of pot still, 2007–2011.

Comparison between pot and patent still products: Pot still whiskey has flavour and bouquet, 1992–3, which are absent in patent still spirit, 1994; these facts enable pot still whiskey to be taken more diluted than patent still, which is better for the consumer, difference between pot and patent still spirit being more of flavour than of strength, 1995–1997. Patent still product is almost neutral spirit, 2043–2045; though some of it is drunk pure, *e.g.*, Cambus, 2046–2049; and it is not deleterious, 1991.

Blending: Witness has no objection to putting proportions on label, 2017–2019; but does not know whether it would be practicable, 2020–1. Average age of blends, 2030–2036. Witness's firm sells blends of pot still whiskey and grain spirit and describes them on label as "a blend of malt whiskey and grain whiskey," 1963–1981; and witness considers that if purchaser asked for "whiskey" and did not specify Scotch whiskey he might quite fairly be given one of these blends, 1982–1985. Witness, however, does not consider that patent still spirit or blend of pot and patent spirit can be described as Scotch whiskey, discussion with regard to this on price lists sent out by witness's firm, 1990 ,2055–2085.

Compulsory bonding: Witness approves of the three years' limit to apply to both pot and patent still products, 2037–8; as whiskey improves with age, though malt whiskey more so than grain product, 2039–2042, 2094–2099; and raw pot still spirit is deleterious, 2100–2103. Witness's firm does not sell pot still whiskey under three and a half to four and a half years old, 2052–3.

Recalled—

Rum: A spirit produced from certain portions of the saccharine matter yielded by the sugar-cane, 13437. Witness's firm sells only Jamaica and Demerara rums, showing a very large proportion of the former, although the latter is a cheaper rum and also a pot still product, 13439–13342, 13448, 13453, 13563, 13576, 13577. They label their rum in fairness to the public, Jamaica rum being considered the superior spirit, 13446–13456, 13462, 13558–13560. No necessity for interfering with sale of either Demerara or Jamaica rums as witness considers the materials used are pure, though he has no means of knowing this, there being no legislation or supervision in the West Indies, 13457–13460, 13572–13574. Their description is considered sufficient by public and witness does not think an Excise label would be any help, 13570, 13571. He considers it would injure the reputation of Jamaica rum if patent stills were introduced in Jamaica, 13575. His firm never blend other rum with Jamaica rum, 13463, 13464. They have no objection to the sale of patent still rum, but would insist upon its being labelled, as it is a cheaper article, 13461, 13471–13478. Improvement of rum by keeping, the price increasing with age, 13465–13470. Witness's firm generally buy their rum about one year old and bond it, 13566, 13567. This is not stated on label, 13568, though it is in the case of whiskey, 13569. The small proportion of drunkenness in Jamaica is probably due to the full flavour of the rum, which can stand a great deal of dilution, 13479. Witness has no knowledge of imitation rums, 13480, 13481. Rum sold as "White Rum" is simply the spirit minus the colouring matter, 13593–13596.

Gin: In this country the spirit used for manufacturing gin is rectified, 13489. Geneva (a corruption of juniper) or Hollands, is distilled mostly from rye, and flavoured with juniper berries and other herbs, 13484, 13486, 13487. The difference between English gin and Hollands is in flavour, not in the price, 13485, 13544. Inadvisability of bonding gin, as it deteriorates, 13490, 13491. This applies also to Hollands, upon the supposition that it is a rectified spirit made in the same way as gin. Witness offers to obtain evidence on the point, 13545–13553. Witness's firm buys a London patent still spirit and makes the gin at their distilleries, describing it as "London Gin," 13578–13582. Witness cannot say if it is essential for the spirit (from which gin is made) to be a corn spirit, 13583, 13584.

British and foreign compounds: Very small export and home trade in these, and witness thinks no restriction in preparation or sale is necessary, as they are not prejudicial to health, 13522–13541. Absinthe, which might be harmful, is hardly ever sold in England, 13542, 13543.

Excise: Witness would entirely prohibit the regulations permitting the mixing of British and foreign spirits in bond for export, especially with rum, which he believes is done at present; the product is sold abroad as the pure article, and thus is harmful to the genuine trade, 13492–13520, 13540, 13544. If this rum were sold as "British Rum," then he would not object to this regulation, 13585–13592. He thinks no restriction should be made on sweetening in bond, 13521.

Recalled—

Definition of brandy: In his opinion brandy is a spirit distilled from wine in the pot still, 17685.

Proper description of contents of bottles: He insists on this, having always acted on that principle, 17686. Would like everyone properly to describe their brandy, it would be a protection to the public, 17716. This applies to all spirits, as well as wines, 17717–17719. All his French brandies are Cognac, but under that label he could equally well include other grape brandies, 17720–17722.

Description of various types of brandies: The cheap varieties are described by his firm as a compound of foreign pure grape brandy and highly rectified British spirit, for domestic purposes, 17687, difference of prices depends on the variations of strength only, 17691, not on the proportion of grape brandy and rectified spirit, 17692.

Definition of Cognac brandy: This is a brandy distilled in the Charente and Charente Inférieure districts, 17696.

Total production: There has recently been a large increase in the total production of Cognac, 17712.

Algerian brandy in future will be prevented from being sold as Cognac, 17729.

MR. F. H. GODSELL—

Is a wine and spirit merchant and importer, and has been over 50 years in business, 17031–17038. Is official taster to the War Office, 17092–17095.

Definition of brandy: Wine from the grape distilled into brandy through a pot still. Cognac contains those medicinal properties not to be found in any other kind of brandy, 17038–9.

Limitation of Cognac: He limits Cognac to the district which has now been defined by the French Government, 17082. Would like to see some sort of Government stamp on the bottles; as a proof of origin, and mark of distinction, 17086, 17090, 17108, 17109. Much of the Midi French wine is probably sold as Cognac, 17096. Witness would insist on all imported brandies having a proper stamp to distinguish them from grape brandies, 17102-6.

Invalidation of guarantees by substitution frauds: He would wish the French Government to become guarantors by affixing a stamp, 17112. The goods under bond would be sufficiently protected, according to witness's opinion, by the Excise certificate, 17112. He further maintains that brandy, leaving the port of exportation, is practically under the control of the Government on the railway, 17120, although the Government has no real responsibility in the matter, 17131. He nevertheless holds that goods under an Excise certificate cannot be successfully tampered with, 17135–6, and that, if any fraud has been practised on the journey, no other person than the dispatcher himself at the point of origin, can be held to be accountable, 17138.

GOFF, SIR WILLIAM—

Is Chairman of Davis, Stangman and Company, Limited, Waterford, and of the Waterford Steamship Company, 2929–30. Witness has been connected with the former firm and resident in Waterford since 1863, 2928, 2931–2; and is not interested in the whiskey trade, 2933, 2953.

Irish barley: The importance of making a proper market for barley in Ireland, as introduction of patent still whiskey has diminished growth, 2934; but native

supply usually sufficient, 2935–2938, 2943, both for breweries and distilleries, 2939.

Definition of Irish whiskey: Pot still whiskey made chiefly from barley and from grain indigenous to Ireland, 2940–2942; though use of imported barley is occasionally unavoidable, 2943.

Patent still spirit is not whiskey, 2944–2946; even if made from barley, 2947–8; but simply pure spirits of wine, 2947. Witness suggests that Excise should classify whiskey, 2949–2951, by recording proportions of mash, 2949–2952.

GORDON, Mr. Luis—

Is British Agent for the brandy business of the firm of Peter Domecq, of Jerez de la Frontera, Spain, and has been for many years in the trade, 17362–17365.

Type of stills in Spain: The type in use is the modified pot still, known as A Premier Jet. The process is based entirely on that of the Charente stills. All Spanish brandy is stored for at least two or three years, 17373–17379.

Definition of brandy: He thinks that it ought to be distilled from the pure juice of the grape without admixture, 17380, 17381.

Limitations as to processes: Witness does not hold these to be necessary, as nobody, in his opinion, would ruin good material in order to bring out neutral spirit of infinitely lesser value. If wine is so rectified as to become neutral he would define such a product as a neutral spirit. Neither would he limit the form of the still, but would gauge its qualities by taste alone, 17382–17386.

Maturation in bond: He does not consider a minimum period of maturation in bond necessary. Young brandy is a perfectly wholesome article, although maturation improves flavour, 17387, 17388.

Medicinal virtues of brandy: He thinks that the young has the same virtues as the old, 17389.

Protection of purity: The Spanish Government have a very strict law to protect the purity of brandy, wine, and industrial spirits, 17371, 17372, 17390, 17428.

Age of brandy: His brandy is at least five years old, 17392. It is stored in wood. The best kind is bottled off after 12 years and 15 years, 17395. On account of greater evaporation brandy in wood improves more than brandy in glass, 17397.

Flavour of brandy: Age improves the flavour by evaporation of certain essential oils, 17398.

Sale of brandy: His brandies are not sold by vintages but by marks, 17434.

Storage of brandy and wine: They store in open casks, 17438–17445.

Average strength of brandy from Spanish wine: This is equal to the average strength of Cognac, 17471.

GRANT, Colonel George Smith—

Is sole partner of the firm of George and J. G. Smith, of the Glenlivet Distillery, Glenlivet. Firm has been in existence since 1824, was the first distillery there, 9138–9143, 9222, and possesses the sole right to the name "Glenlivet," 9144–9147. Witness appears as president of the North of Scotland Malt Distillers' Association, 9226, which comprises forty-three distilleries, 9148–9152, all of which are pure malt pot still distilleries, product of some of them sold mostly for blending, 9223–9225.

Definition of whiskey: 9156–9158, 9207–9214. Witness does not approve of patent still spirit being sold as "whiskey," 9174; its chief recommendation is its cheapness, 9202–9205, is doubtful as to whiskey made in a pot still heated by steam being called "Highland malt whiskey" (though such stills are used in the Highlands); direct fire heat is necessary, and witness does not think the old-fashioned form of still is likely to be improved on, 9191–9199, 9233, but progress should not be prevented, 9234, 9235.

Production of whiskey: Retention of foreshots and feints, 9245–9250. Particular materials and water, direct fire heat, and care in production are fundamental necessities, 9267–9270, while ageing is also requisite, 9284, 9285. Barley procured if possible from Scotland, if bad season the best to be had from Denmark, which would not prevent product being called Scotch whiskey, 9154, 9155, 9227–9230, witness would not use light Danubian, 9189, 9190. His whiskey is all pure malt whiskey and sold by distillery as self whiskey, but much of it afterwards used for blending, 9159, 9161, 9162, 9292, 9293. Whiskey produced in exactly the same way now as in the beginning, 9166–9170, is one of the best whiskies obtainable, and is economical because of its capacity for dilution, 9236–9239. Cost of Scotch whiskey, per gallon, 9243, 9244.

Compulsory bonding: Witness is in favour of two years limit with patent and pot still spirits, as new spirits are unpalatable, though he knows of no real ill effect on health from them, 9183–9188. Firm's whiskey is generally sold at between eight and twelve years old, 9200, 9201. Maturing improves the flavour, the unpleasant bye-products change, but witness does not think they increase, 9285–9289.

Blending: Witness has no objection to his whiskey being blended with patent still if 50 per cent. of each is used, 9163–9165, 9171–9173, 9207, 9271, 9272, this being standard fixed by Association for Scotch whiskey, 9156, 9157, 9176, it protects quality and flavour to a certain extent, but has serious disadvantages, 9271–9283, blending improves some whiskies, 9206. There is a tendency to increase the amount of cheap blends without indication to the public, 9171–9175, 9231, 9232, 9276–9278, 9290, 9291, blends have popularised Highland whiskey though lessened demand for self whiskey, which, however, can easily be obtained, 9240–9242, thinks the blend with the greatest amount of malt would be the best, 9175, 9251–9253, 9275.

Labelling: Witness thinks patent still whiskey should be labelled "patent spirit," and a blend, unless made according to regulation, should be labelled "blended spirit." He thinks public would gradually get to rely on the labels, 9175–9182. Difficulty of establishing a standard, classification suggested by witness, chiefly useful as a guarantee to the public, 9215, 9218–9221. Witness's self whiskey labelled "Smith's Glenlivet," blends labelled "Blended Glenlivet" or "old vatted Glenlivet," 9294–9299.

Flavour: This is the chief point in Scotch whiskey, and depends on the materials used and the process of production, 9254–9264, aroma and body are also of importance, 9265, 9266.

GREENLEES, Mr. James—

Is partner in firm of Greenlees Brothers, Scotch whiskey blenders and malt distillers, 6364, 6385, established in 1871, 6368, 6383–4, carrying on business in London and Glasgow, 6365, 6386, and director of Greenlees and Colvill, Ltd., Colvill, Greenlees, and Co. Ltd., and Speyside Distillery Co. Ltd., 6366.

Definition of whiskey: Whiskey should be made from cereals only, excluding rice, 6435–6438, 6551–6552, 6595–6597, 6226–6228, but not maize, which though cheaper than grain makes a good whiskey, which rice does not, 6629–6642. Grain whiskey recently called whiskey in Scotland, previously called spirit, 6458–6459. Witness would call whiskey made in England, Scotland or Ireland, English, Scotch, or Irish whiskey, not whiskey, 6501. Objection raised to whiskey made in England being called Scotch or Irish, 6502, as at present done, 6506, 6687–6688, suggests control by Excise to prevent this, as beneficial to consumer, 6689–6694.

Witness considers pure malt whiskey should be made in pot stills from malted barley only, 6460.

Analysts: Witness has a bad opinion of them, 6539–6540. Gave proof of three different analyses of same whiskey, 6541–6543. Considers standardisation impossible, 6544–6550. Witness's firm has tried several analysts ineffectually, and would like to find a reliable one, 6556–6558. Would approve of formation of Board of Reference, 6670–6673. Witness's firm could detect adulteration of their whiskey by taste, 6553–6555.

Compulsory bonding: Witness's firm has no objection to this. Suggests two or three years, 6509–6512. Sees difficulty regarding gin, 6604. Seller must guarantee age of whiskey, which would be healthier by bonding, 6513–6515. Trader's profit would be on increased price, 6516–6518. Witness's firm sell 75 per cent. of their whiskey over four years old. Age is stated on price list and customer orders according to price, knowing age, 6519–6523. Five years, average for Irish whiskey, 6668-6669.

Blending: Witness has forty years blending experience, 6367. Preference now for blended whiskey, 6379-6380, 6390-6391, 6433-6434, especially for consumers of sedentary habits, 6678, being lesser intoxicant than malt, 6392-6396, 6674-6671, 6679-6680 Witness considers blended whiskey more beneficial than malt, 6397-6398, and prefers an older whiskey, 6419-6421, 6663-6667, 6681-6686. No standard of blend established, supplied to meet demand, 6387, 6389, 6400-6405, 6412. This applies also to publicans, 6424-6432, who generally buy their whiskies blended. They sometimes buy from two or three blenders and blend to suit their customers, 6579. In 1871 and earlier, trade was in unblended self whiskies characteristic flavour being according to district, 6369-6370, with large Scotch trade of patent still whiskies, 6371-6373. Preference at that time for Irish whiskey in England, Scotch being too highly flavoured, 6374-6378, 6381-6382. Less demand for Irish whiskey now, 6507-6508—though still a large blended trade, 6657—people having been educated up to good Scotch blends at reasonable prices, 6612-6615. This change has been effected by preference for mineral waters with whiskey, a stronger whiskey being required for toddy, 6695-6701. Variation in flavour of whiskies from different distilleries in the same district made in the same way, 6559. This is affected largely by the water used, 6586-6588, 6590-6591. These variations blended together produce better whiskies than any distinct one, 6560-6561. Witness's firm and other blenders object to blend of English, Scotch and Irish whiskey being sold as Scotch or Irish, 6592-6594. A percentage of malt always used in firm's blends, which varies, 6406-6407, the higher priced blends containing more malt, 6408-6411, 6422-6423. This applies also to cost per glass, 6580-6582. Pot still whiskey made from malt, costs more than patent still made from malted barley and maize, 6413-6415. Witness considers a better blend made by mixing whiskies of different years together, than all of one season, owing to differences in quality of materials used, 6587-6589. Witness's firm sell blended Irish whiskey, 6605-6611. Witness's firm blend varieties of malt and grain alone and together, 6439-6441, 6621-6624, the grain being valuable in blend, 6618, 6658-6660, grain whiskey is often sold unblended, 6619-6620. Greatest demand for the malt and grain blend, which witness recommends, 6442-6445. Blended whiskey generally supplied in England when Scotch whiskey is demanded. Pot still would surprise consumer, 6456-6457. Difficulty of protecting consumer from bad blends, 6617. Witness considers protection in price unnecessary, 6490-6491, but ultimately agrees to limitation in same, 6661-6662. Witness would not require a minimum amount of malt in blend. Competition would retain high standard, 6625. Demand for cheaper whiskey since existence of tied houses, 6416-6418. Witness does not know if this is unwholesome, 6419.

Labelling proportion: Witness objects to this as being difficult, 6477, 6571, 6583-6585, 6724, 6726-6729, unfair to trader and no protection, 6446-6452, 6473, 6478-6479, 6562-6565. No help to the consumer, 6453, who purchases the blend he prefers by taste and name of firm, 6475-6476, 6480, 6486-6487, 6566-6570. Witness's firm have no distinguishing mark as to proportions, 6730, 6732, whiskey therefore being untraceable, 6733, 6742. If enforced for Scotch blends, it should be for Irish pot still whiskey, 6462, as both grain and malt whiskey are made and blended in pot stills, 6643-6654. Age and name only stated on firm's bottles, 6454-6455, 6702-6721. Labelling of name (pure grain, pure malt and blended) only since Islington case, owing to increased demand for grain and pure malt whiskey, 6734-6736, though this latter was almost invariably returned for blend, malt being too highly flavoured, 6469-6472. Would have no objection to compulsory labelling of name, 6722-6723. Witness has no experience of publicans or customers objecting to this, 6737. Witness handed sample of his firm's label to Commissioner, admitting they were no protection from retailers' wrong description over counter, 6738-6741.

Witness considers differentiation of Scotch or Irish whiskey necessary by publican, 6503. Either would be given if whiskey were asked for, not English, as no English whiskey is made from cereals, 6504-6505.

Irish and Scotch people under the delusion that their whiskey does not taste the same in London as in Ireland or Scotland, 6655-6656.

Stronger whiskey drunk in the Highlands than in England, 6616.

Witness handed in notes of materials used in manufacture of whiskey in Scotland, Ireland and England, obtained from 1907 Blue-book, showing greater percentage of malt than unmalted grain in Scotland, 6492-6498. This malt used for both pot and patent still, 6496-6500.

GREIG, Mr. Robert Bertram Gillespie—

Is vice-chairman of the Glasgow and West of Scotland Wholesale Wine and Spirit Distillers' Association, consisting of seventy members; also, managing director of Wright and Greig, Ltd., Glasgow, blenders and bottlers of Scotch whiskey, established since 1868, 7320-7322; with a considerable home and export trade, 7323. Witness has had a distillery for about eight years in Morayshire, 7368-7370.

Witness considers that any spirit manufactured from cereals in Scotland may be described as Scotch whiskey, 7324-7333.

Blending: Witness states that the trade decided to fix a minimum quantity of malt, and that 30 per cent. had been decided upon, 7334-7337; flavour depends upon the blend being composed of both old grain and old malt whiskey, and the value depends more on the pot still to which the distinctive flavour and aroma is largely due, 7343-7352. Witness considers that a blend of new whiskey is bad, but that a blend of 5 per cent. malt and 95 per cent. grain is not bad if over four years old, 7364-5.

Bonding of whiskey: Witness says his association would put an age-limit of two years, though he does not know the effect upon the system of new as against old whiskey, 7353-4; but personally considers all new whiskey is bad, 7364.

Pot still whiskey sold to customers was often returned. He thought they considered the flavour too pronounced, 7355-7358.

Witness has very little experience of Irish grain as compared with Scotch grain, 7338, and has no knowledge of Irish whiskey, 7361.

Witness states that they had both bottled and sold patent still whiskey before the Islington case, and that the profit on selling either blends or self whiskey depends on the age, 7372-7374.

No objection to labelling bottle as "Blend of Malt and Grain Whiskey," but objects to giving proportions, 7372; which, however, they could easily do, but it would not help the purchaser, 7379-80.

They occasionally made up a blend to suit the retailer, and they never had any objections to the kind of description as applied to the whiskey supplied, 7381-7384.

HAIG, Mr. Charles—

Is Distillers' Agent, Whiskey Merchant, and Broker, 11793; past Chairman of Wine and Spirit Association, 11794; Managing Director of Haig's Cooperage, Limited, 11795, 11796. Witness has had 36 years' experience in the whiskey trade; he deals in both pot and patent still whiskey, and has considerable knowledge of the trade, 11797-11801, which was formerly more in pot, though now more in patent. This is attributable to the increase in blending, 11801, 11802, which is due to the public demand for a better and milder whiskey, this having increased greatly in the last 36 years, partly due to the large stocks of pot and patent still whiskey on hand, 11803-11811. Price of pot still has decreased to a greater degree than patent; a blend is sold at a price between the two, dependent upon age and preparation, 11811-11817.

Definition of whiskey: Witness would call by this name the product of either pot or patent still, or a blend of both, 11821-11827, 11869. The term "Scotch" or "Irish" to be applied only when made in Scotland or Ireland, 11828, 11868, 11870-11872. Witness produces his own price list (1882) describing as Scotch and Irish grain whiskey produced in the patent still, 11847, 11848, 11907. Most of the Irish whiskies listed are pot still, as no great stock of old patent still whiskey is kept in Ireland, 11913-11915, although witness can show some patent still whiskey is more expensive than pot still whiskey, the latter is a finer and more valuable article. The value of whiskey depends upon what it costs the seller, 11917-11931. London grain spirit has every right to be called

whiskey, 11896, 11932–11934. Patent still spirits vary in flavour, though not to the same extent as pot still whiskies, 11898–11900, 11933, 11934.

Labelling: Beyond the usual invoice, witness sees no necessity for this between distiller and merchant, 11829, and thinks that in retail and public-house trade no restriction would be possible or necessary, 11830–11846, 11903–11905.

Maturation: Pot still whiskey improves to a much greater extent than patent still, which, however, would be palatable in a shorter time, 11818, 11819. The size of the cask has some effect on this, spirit in smaller casks maturing to a greater degree, 11851, 11873–11880. Improvement in whiskey is a matter of taste more than of health, 11887–11889.

Compulsory bonding: Witness suggests difficulties arising owing to possibilities of making casks impervious so that they would lose nothing by evaporation, although whiskey would not properly mature, 11849–11856, 11881–11886. Compulsory bonding would also be an inconvenience to the trade owing to the capital necessary for it, 11854–11856. Witness would prefer a rebate on duty as an inducement to bonding, 11886. With regard to foreign spirits, witness is against their detention in bond owing to the practical difficulties, 11857–11867, and to a large extent to the unreliability of some foreign certificates, 11857, 11891–11894.

Brandy: Witness thinks much new brandy is imported, 11859–11866; thinks two years would be the worst possible bonding period, 11859. Brandy is imported so as to have an age guarantee for the length of time bonded, 11939–11941.

HARRIS, Mr. Alfred Edwin—

Medical Officer of Health for the Metropolitan Borough of Islington for 16 years, and for the county borough of Sunderland for 11 years prior to this, 6038, 6039, witness is administrative officer responsible for the taking of samples under the Sale of Food and Drugs Acts, 6040–6043, which are strictly enforced in Islington, 6046, 6047.

Classes of offences dealt with under Acts: (1) Addition of injurious ingredients to food. (2) Addition of ingredients which fraudulently increase bulk. (3) Substitution of one article for another. (4) Selling a better article than demand, *e.g.*, butter and margarine, 6044, 6045.

In 1905 witness's attention was directed by Labour members of Council, etc., to sale of so-called whiskey, and he had been informed that German spirit was offered for sale to publicans together with essences to add to it to make Scotch whiskey, 6055, 6327–6329, though this was not bought by publican, 6330, 6331. Witness's knowledge and opinions before the prosecution, 6347–6354. The successful brandy prosecutions had shown that patent spirit was used to adulterate brandy, whiskey and rum, 6048–6051, 6057–6058, and that maize spirit was sold as Scotch and Irish whiskey, 6226. Analyst's report (which stated that out of 15 samples one was Scotch whiskey, five were grain and nine contained large proportions of patent spirit), resulted in prosecution, 5097–6001, 6347–6354. Patent spirit made in London, and labelled N.S.S., which witness contends means Nicholson's Special Scotch, though he has at present no proof of this, 6101–6105, 6115–6133. Summons in this case was delayed, and on trying again to obtain sample, a label was put on stating it was a mixture of pot and patent spirit, 6102–6113.

An article by Dr. Schidrowitz in the "British Medical Journal," in which he sharply differentiated between patent still spirit and pot still whiskey, both in process and materials, 6134–6137, 6147, 6148, and also between relative fractionation in the two stills, 6150, 6151, also influenced witness who does not see how Dr. Schidrowitz's views, as to facts, can have changed since then, 6138–6146. Evidence of Mr. Currie before Select Committee was also a factor, 6071, 6072.

Patent still or grain spirit: Witness considers that addition of this to whiskey is an adulteration, 6323–6326. It is added to new pot still whiskey which gives strong flavour to the resultant article, 6088, 6089, this is shown by advertisements, 6090–6095. Grain spirit has been advertised by the Distillers' Company of Edinburgh for ten years in sharp contradistinction to various sorts of whiskey made by them, 6059–6067; this advertisement was defended by the company as being a clerical error, 6067–6070. Low relative price of patent still in comparison with pot still product, 6079; this is, as is always the case in adulterations, the reason of the addition, 6080–6087, though pot still can be sold pure at a fair profit, 6297–6299. Patent still spirit ought to be sold as such, or as grain spirit, 6230–6232, 6334, 6359. Witness is doubtful whether it should be called whiskey, 6233–6235; this was a point of dispute between patent still distillers and blenders, 6236–6238. Witness can find no results with regard to the different effect of different kinds of whiskey on health, 6258–6263, though personally he thinks that the effect of patent spirit is more permanent but less immediate than pot still, 6265–6269, which probably accounts for more patent still being drunk, 6308–6313. Dr. Wiley regarded patent still spirit made in the United Kingdom as being an essentially flavourless alcohol, like the American patent still product, and defined Scotch and Irish whiskey as being the pot still products only, 6153–6158, 6162–6165. Grounds on which this definition rested, 6314–6319.

American Pure Food Law compels all whiskey, both home-made and imported, to be labelled either "Straight," "Blended," "Compounded," or "Imitation" whiskey, 6161, 6165–6177. American pot stills are non-fractionating, 6178, 6179.

Regulations with regard to the admission of whiskies into Australia including a minimum age, 6180, 6181, 6189, 6190. In Western Australia, Government analyst wished to label whiskey as "Pure Malt," "Blend of Silent Spirit and Malt," or "All Silent Flavoured Spirit," 6182–6184, and gave report with regard to alleged deleterious whiskies sold there, 6187, 6188, 6191–6196. Analyses and paper by Messrs. Mann and Stacey, 6184–6186.

Analogy between present case and use of glucose in jam, selling beet sugar as Demerara and margarine as butter, 6242–6251, 6254–6257; unfair competition in these cases must be considered, 6254. Witness thinks duty of the sanitary authorities is to prevent public being deceived by flavour into getting an article of which they do not know the composition, 6252–6254.

Alteration of labels since Islington prosecutions, 6215–6217. Witness gives "Black and White," a well-known blend, as instance, 6217–6225.

Dilution of whiskey: This can be done to any extent without its being an offence under the Food and Drugs Act, so long as a notice is put up, 6226, 6290–6296, 6300–6307. Witness thinks that all whiskey ought to be sold at 20 under proof, 6282–6289.

German spirit: General opinion is that this is inferior to English or Scotch patent spirit, but witness does not think this is certain, 6056, 6322.

Silent spirit is spirit so rectified that its origin cannot be told, 6339–6341. Witness thinks that silent and patent spirit are synonymous, 6342–6346, and that the distinctions between these and pot still whiskey were not particularly emphasised by Select Committee. Evidence of Dr. Pavy and Dr. Bell in this connection, 6336–6338.

Artificial flavours added to make whiskey: Prune wine advertised in Dublin for this purpose, 6197–6207. Emanuel Kern of Edenboken sells Cognac oil for this purpose, 6207–6211. Addition of these has not been detected and witness does not think it is common, 6210–6214. London and Manchester methylators advertise that they supply whiskey, Irish whiskey, and Scotch whiskey, 6062–6065.

Blending: Witness does not agree with the conclusion of the Select Committee as to mixing pot still whiskey with patent still product, 6073–6078. Blending by publicans often produces objectionable concoctions, 6332. Witness thinks that blends ought to be labelled with proportions, 6362.

Brandy: After these prosecutions, circulars were sent out by firms interested to publicans advising them to notify that brandy sold was not derived solely from grapes, 6270–6275; some publicans then sold it as Eau-de-Vie, 6275. Brandy prosecutions were also conducted in Glasgow, 6276, 6277.

Rum: Jamaica rum, which is made in a pot still, is undersold by rum made in Demerara in a patent still. Jamaican Government has sent Mr. Nolan to protect their interests in these cases, which are prosecuted under the Merchandise Marks Act, 6278–6280.

Historical evidence with regard to use of term "whiskey," its origin from the Celtic "Uisge" or "Uisque," 6239–6241.

HARRISON, Mr. R. W.—

Witness supplements Mr. Martell's evidence on distillation of Cognac brandy, 15140.

Process of distillation: The wine is distilled in the old form of pot still, 15142, 15143, which varies in size, 15144, 15145, 15157, and is put in at its natural strength, which varies with different years, 15140, 15141. Two distillations, 15146–15156. In some cases a still "à premier jet" is employed, which is a pot still completing the process more quickly than the ordinary one, and thus economising fuel, 15159–15162. When the distilling season is finished, the stills are sealed up by the Excise, who unseal them the next year to begin distilling, 15180–15182. The distilleries must be open to the Excise at all times, 15209. Two certificates are granted—one, a guarantee of purity, and for new brandies one of origin, 15208. The owner of small vineyards distilling brandy must declare to the mayor the quantity of wine and afterwards the quantity of brandy. The Excise have no absolute control over the proprietor, 15211–15216.

Ether standard: This could not be considered an absolutely reliable proof of the purity or non-purity of Cognac brandy, as undoubtedly the quantity of ethers varies in a greater or lesser degree, both in different years and by the more or less care devoted to distilling, 15166–15169. Discussion, 15183–15188.

Since the dearth of wine owing to the phylloxera in 1875, witness's firm have largely done their own distilling, 15170–15173. The Charente wines for drinking are disagreeable, but they have a special quality which produces the characteristics of Cognac brandy, 15175–15177. They sell by vintage of year, 15189, the age of their brandy generally exceeding two or three years, 15190–15193. Since the phylloxera invasion the demand for bulk supply has decreased, the trade being mainly a bottle trade, 15197–15199. Spurious imitations are often sold in this country as Martell's brandy, 15194–15196, 15200–15207; this is detected by taste, 15196.

HARTLEY, Dr. Walter Noel—

Witness is D.Sc., F.R.S., Fellow of King's College, London, Professor of Chemistry in the Royal College of Science, Dublin, and Dean of Faculty in Dublin, 18362–18365.

The practice of blending malt or grain whiskey with materials of varied character but certain alcoholic strength has been extant for over 25 years, 18369.

In witness's opinion blending spirit is not always of the same character, 18373.

Whiskey, Taste of: Nitrogenous bases largely contribute to, and influence, the taste of whiskey, 18398.

Witness thinks that the secondary products in certain whiskies are not always of an innocuous character, 18410.

HAWKER, Mr. Henry Gore—

Is Member of firm of Messrs. Coates & Co., Blackfriars Distillery, Plymouth, licensed rectifiers, whose principal business is in gin, 13940–13947.

The registered title of their product is "Original Plymouth Gin," and it is quite distinct from London gin, 13948–13952. Witness's firm issues labels for use by bottlers, on condition that the spirit is bottled exactly as received; each label being marked, complaints as to strength, etc., are usually traceable, 13953–13956, 14036–14038. Although "Plymouth" gin is made by another firm, not at Plymouth, witness thinks it should be made in Plymouth. In Devon and Cornwall, if gin were asked for, witness's gin would be given; it is, however, an acquired taste, and elsewhere the reverse would be the case, 14039–14078.

Definition and manufacture of gin: Witness thinks it ought only to be made from cereal grain spirit, 13957, 13961, 13978–13983. Witness uses ordinary Scotch patent still spirit, and thinks it is probably less "rough" and generally better than, say, rectified molasses spirit, 13962, 13963, 13978–13983, 14006–14011. The patent still spirit is doubly rectified and flavoured by witness's firm, 13957–13960. He considers rectification absolutely necessary for manufacture of gin, and states that the spirit should be actually distilled with the juniper berries and other flavouring materials, 13971–13977, 13988–13997, 14031–14035. Quality of gin is tested entirely by taste; although it has been analysed witness does not know whether the product is uniform, 13999–14005. Price of this gin, which is more expensive than London gin, is about the same as cheap whiskey, 14012–14023, 14026–14030. Witness would object to his materials and processes being disclosed, 13957–13960, 13964, 13965, 14024, 14025. He does not think gin is adulterated 14079–14081.

Compulsory bonding: Witness objects to this as gin loses its flavour and deteriorates by keeping, 13966–13970, 13985–13987.

HENDERSON, Mr. Alexander—

Is member of firm of Kuhner, Henderson & Co., London, sole agents for the Angostura bitters made in Trinidad since 1824 by Dr. J. G. B. Siegert & Sons, 14321–14325, 14334.

Angostura bitters are classed under compound spirits as sweetened spirits; in the trade they are always bracketed with liqueurs and cordials, 14326–14329, 14343–14346.

Bitters should always be alcoholic fluids, although the alcohol is only used as a solvent for the flavouring essences which are added after distillation. The spirit used is a secret, but it is old pot still spirit, so that keeping would not improve this product, 14331–14333, 14336–14340, 14345–14350. Witness believes new grain spirit is sometimes used in preparation of liqueurs and cordials, 14350–14352.

The process of manufacture is entirely secret, and witness would strongly object to its being disclosed, or to any restrictions being put on it or the materials used, 14330, 14335, though he would not object to an inquiry by proper authority on public health grounds, 14353–14355.

HENNESSY, Mr. J. D.—

Represents J. Hennessy and Co., brandy exporters, principally to England and America, 15219–15221, 15225, 15392, 15393. They buy largely from proprietors; after the phylloxera disease of 1875, however, when most of the vines were destroyed, they were compelled to distil, 15226–15230. This destruction ruined farmers, who were unable to hold a large stock, 15228, and also stopped the large trade in bulk, the preference now being for bottled brandies, 15232, 15394–15397.

Brandy is distilled in the old pot still, 15459–15461, though sometimes the still "à premier jet" is used, 15459. More highly rectifying stills are used in South of France to expel the soily taste noticeable in their brandies, 15462–15466. The object of blending is to have a good brandy and to decrease the price, 15469–15471.

Cognac brandy: The produce of the distillation of the wine grown in the neighbourhood of Cognac, 15222, 15233–15236. He gives his idea as to the probable origin of the brandy trade (started about 1720), 15222–15224. Bottles are labelled with the name of the proprietor and "Cognac," which signifies Cognac brandy, 15397–15402.

System of acquits: These are of three kinds; a white acquit for spirits made under the supervision of the Régie since 1903, 15247–15259, 15273–15282; a second white acquit for spirits made under the law of 1872, 15259, 15264, 15283–15285; and a red acquit, which is used for all other kinds of spirits, 15249, 15287. Both the white acquits represent solely the distillation of wine or fruit, and such spirits must be kept in a separate "chai" or cellar, divided by a public street from the "chai" containing red acquit spirits, 15245–15308, 15484–15487, 15881. An administrative decree will shortly be issued delimiting the area in which Cognac can be manufactured, 15264–15268, 15309–15337. The new certificate which will be granted should thus safeguard the interests of the Cognac brandy producers, 15318–15337. Discussion, 15377–15391, 15483–15511, 15518*a*–15527. Witness thinks the Cognac should be stored in a different "chai," 15581, 15582.

Pure Food Law (1905): Its object is to establish definitions of the sense in which a particular description should be used and to see that the regulations are conformed to when the descriptions are used, 15334–15370. Discussion, 15371–15376. The consumer buying brandy by bottle can be protected by a seal

put on by the Excise, 15403, 15534, 15535, but in the case of a man buying a glass of Cognac in a public-house bottles are often refilled with inferior brandy, and witness can suggest no method of protection, 15404–15418, 15428–15430. He considers the Government should protect the consumer, but the consumer ought to help, 15533–15558, 15564–15568. Owing to prosecutions the customer asking for Cognac in France receives, if not Cognac, something not far removed from it, 15560–15563. Witness considers the acquit system will help this law, the two supplementing each other, 15419–15427, and illustrates this, 15491–15511. In detecting frauds the evidence they believed in was tasting, not analysis; uniformity of taste meaning uniformity of composition, 15431–15434, 15494–15500, 15569–15577. Grain spirit is not often sold for Cognac, as sellers are liable to be fined and imprisoned, 15512–15518.

Brandies are matured in oakwood casks, mostly hogsheads, which mature quicker than puncheons, 15238. Cane sugar is used to sweeten the brandy, though the proportion now used is less, 15238, 15239. Colouring is not greatly resorted to, 15239, 15240. Declaration of composition is necessary for United States, 15241, 15242. Maturation reduces the alcoholic strength and increases the flavour, 15472–15474; the percentage of ethers is bigger, 15476, 15479–15482. Witness considers there are medicinal properties in matured brandy, but can offer no explanation, unless it is concentration, 15474–15478.

There are a great number of Excise officers in Cognac, 15583–15585, and witness describes method of supervision by Excise of the stock account, 15440–15456, and stock-taking, 15435–15439, 15457. Inaccuracies of the stock account are heavily fined, 15451. Strict supervision is kept to see that the wine for distilling contains no sugar, 15578–15580.

HERON, Mr. John—

Is Fellow of the Chemical Society, of the Institute of Chemistry, 12392, also Past President of the Institute of Brewing, 12393, and is an Analytical and Consulting Chemist, 12394.

Definition of Jamaica rum: Rum manufactured in a pot still by direct fire, 12408, 12411, though steam heating is largely used in Jamaica for pot still, 12412, 12468. Witness has not much experience in still work, 12415. He considers Irish pot still distillation to be practically the same as that carried on in Jamaica, 12408, 12416.

Flavour: The special flavour and odour of Jamaica rum is principally due to the secondary products. These are absent in patent still spirit, 12409, 12410, 12421. Witness has made several experiments in this connection, 12417–12420. Flavour is also affected by the volatile products of the sugar-canes, 12414, 12422. Witness has no knowledge of the nature of these, 12423–12425.

Analysis of Jamaica rum: Jamaica rum has a very high acidity, 12397. Large quantity of secondary products in Jamaica rum as compared with Demerara, 12396. Witness would fix as a standard the analyses he has made from genuine Jamaica rum, showing limits of from 860 to 200 of esters and ethers, 290 to 65 of acids, 109 to 19 of aldehydes, and 14 to 1·5 of furfural, 12426, 12428, 12398–12401, 12406, 12407, 12435, 12436, 12454–12467, 12491, 12492. Witness lays special stress on amount of esters, 12401, as he attributes any beneficial action to high percentage of these, 12488, 12489. Jamaica rums are made containing more ethers, but witness believes these analyses were of rum specially made to increase those ethers, 12493–12495. The fixing of standard is to protect the pure Jamaica rum, as adulterated rum is so described, 12476–12482. Rums sold as Jamaica which were greatly below the standard, were condemned by witness, 12483–12486. Witness could differentiate between Jamaica and other rums, by value of esters, 12402. He has made several analyses of supposed pure Jamaica rum in connection with the attempt to put the Merchandise Marks Act into force, and his analyses were frequently confirmed by expert tasters, demonstrating the adulteration. Only about five per cent. were genuine samples, and in the cases of adulteration the amount of esters was below 200, 12397, 12426, 12431–12434, 12437–12440, 12451–12453, 12490. Witness has not fixed his standard from these analyses, 12454, 12467. Witness is prepared to give proofs, 12441–12445. Difficulty of determining the kind of spirit used in the adulteration, 12448, 12449. He does not agree with Mr. Cousins, whose opinion, as given in the "West Indian Bulletin" of 1907, is opposed to an analytical standard, 12405–12407, 12427. Witness is aware that the Jamaican people will not adopt an analytical standard, 12404. Tasting and smelling as well as chemical analysis are taken into account by witness in deciding purity, 12429, 12430. Witness considers that adulterated rum is injurious for consumption, 12469–12475. He has no evidence that the addition of silent spirit to Jamaica rum is injurious to health, 12487.

HINE, Monsieur Andre—

Witness's firm are brandy shippers and distillers, of Jarnac, 15586–15590, 15611–15613, 15626.

Cognac brandy: The distillation of the wine of the Charente district, 15591–15593. It does not require to be kept for any length of time to be wholesome to the consumer, and is only a matter of being less palatable young, 15606–15610. Witness considers the delimitation of the Cognac district will be advantageous, when it will be necessary to store the Cognac in a separate warehouse, 15598–15605, 15617–15619. Cognac is certified as (1) "distilled in the Cognac district" for America, 15627, 15630; (2) "entirely the product of distillation of wine from grapes in Cognac district and of two years' maturation" for Australia, 15628–15630.

Casks of Cognac are branded "Thomas Hine and Co., Cognac," 15620; cheaper qualities, "eau-de-vie" or "brandy," 15621–15625.

HUTCHISON, Dr. Robert—

Is Fellow of the Royal College of Physicians and Physician to the London Hospital, 11026–7. Has studied and written on the subject of food and dietetics, 11028; and studied the effects of whiskey, 11029. Has patients from very poor parts, 11104; where probably much cheap whiskey is sold, 11105; cannot trace any special alcoholic diseases resulting from this, 11106–11111.

Whiskey for medical purposes: Is ousting brandy, on account of the difficulty of obtaining good brandy and its price, 11042–11044, 11048; and because of its being purer, 11045; although brandy is still considerably more used, 11046–7. In witness's hospital there is a movement in favour of whiskey 11047–8; but he does not consider it so beneficial, 11049, 11084,11089. Headaches and digestive disorganisation, generally attributed to the presence of bye-products in spirits, 11080–1. Question whether pot still whiskey might be an advantage and more economical in medical cases because it will bear more diluting, but witness does not think so, as it is more injurious, 11082.

Whiskey as a beverage: Consumer as a rule does not know the difference between the kinds, but goes by his own taste, 11064.

Materials used in the production of whiskey, 11030–11031: Witness does not think the difference of these in "pot still" and "patent still" matters, 11050–11054, 11057; the most important factor being alcohol, 11032, 11039, 11053, 11099; bye-products having little effect or value in witness's opinion except as flavouring, 11033–4, 11040–1, 11070, 11099–11101; advisable to know source of whiskey, 11055–11063; but does not think that restriction in materials used would influence health, 11058.

Maturing of spirits: No convincing evidence to prove the advantage of this in whiskey, 11054–11056, 11071–11076, 11084–11087, 11092, 11095–6; difficulty of obtaining reliable evidence, 11077–11079. Necessity for this depends on presence of bye-products, 11093–4, and for this reason malt whiskey requires longer to mature than grain whiskey, 11035–11037; and if not properly matured is more injurious, 11038–11103. Witness would like age of spirit stipulated by law, 11059; but would not care to fix age-limit, 11060.

Labelling of bottles: Witness thinks this would be an advantage, to distinguish between malt, grain and

a blend, 11061–2, 11066–11069, 11090; would also be an advantage in brandy as a protection to the buyer, 11083; and patient, 11090; but does not consider "faked" brandies necessarily injurious, 11083.

Wines: Cannot compare these with spirits, 11098. Bye-products in these, especially acids, are more important than in spirits, 11097; sometimes labelled with vineyard, but not necessarily, 11066–7.

Case of arsenical poisoning by beer in Manchester, 11112–11114, 11116.

HUTCHISON, Mr. Thomas—

Is member of firm of Hutchison and Co., wine and spirit merchants, Leith, established a century, also representing Edinburgh and Leith Wholesale Wine and Spirit Dealers' Association. Has home and export trade, chiefly English and Scotch, 8215–8225.

Record of witness's firm in 1830 showed description of malt and grain spirit as "Aqua." One early instance shown of grain spirit called "Common Whiskey." After 1846 grain distillers adopted the word "Whiskey," malt distillers retained "Aqua," 8226–8239. Witness unable to translate the meaning of "Common Whiskey," 8305–8306.

Witness's definition of Scotch whiskey: A spirit distilled in Scotland, whether malt, grain or blended, from cereals with a twenty-five per cent. minimum of malt, 8240–8246, 8293. Witness would object to differentiate in blends, 8315–8317.

Establishment of standard: Witness objects to this owing to different blends used, varying according to climate, 8269–8271, 8290–8292, 8301, 8302. Same borne out with beers, 8303, 8304.

Blending: Witness does not consider knowledge of high percentage of malt would add to comfort of consumer, though he might prefer to know whiskey was thoroughly matured, but composition of malt and grain on label would not inform him of this, 8320–8322, and witness objects to stating composition on label, 8260–8268. Lowest quantity of malt used in firm's blend is about 13 per cent., 8294–8298, 8312. This not high quality, 8300, and is not supplied to clubs and regimental messes, 8299. Witness would not say that this blend was inferior to one with 50 per cent. of malt, 8313, 8314. Witness's firm sells blended Irish whiskey, blended in Ireland, 8276–8281. Scotch whiskey they blend themselves to a large extent, 8282–8286, mixtures of both Highland and Lowland malts used in same blend, 8286–8289. Price of blended whiskey increases with age, 8318, 8319.

Compulsory bonding: Witness personally and on behalf of the Association agrees with this. Suggests three years' limit, 8271–8274; this would probably make it necessary to provide more warehouse accommodation, 8307–8310. Other firms carrying less stock might object to limit, 8311.

After Islington case some inquiries received for malt, which was not appreciated. It was not however returned, but proportion of grain sent to reblend, 8253–8256. Malt whiskey was found to be too rich. Grain more suitable for sedentary people, 8257–8259. Witness finds a lighter whiskey is drunk in towns than in the Highlands or the country, 8247, 8248. Does not do much trade in North of England, 8249–8252.

HYLAND, Mr. John—

Witness has had 35 years' experience of the spirit trade with his firm, whose business extends all over Ireland, though chiefly in the South. They are Distillers' Agents, and sell a great deal of Jameson's, Roe's, Power's, and D.W.D. whiskey, 12031, 12033–12035, 12037, 12038, 12044.

Irish whiskey: Witness's opinion, and that of practically the whole of the spirit trade in Ireland, is that this must be distilled in a pot still from cereals indigenous to Ireland, and excluding maize, 12031, 13032, 12114–12117. In the South of Ireland and Dublin there is practically only pot still whiskey sold, 12039, 12040, 12049, 12050. The reputation of Irish whiskey depends on the pot still product, 12070, 12071. Raw pot still spirit is undrinkable, 12075, but old pot still has good effects, 12079, 12081. Witness has actual experience of satisfactory use of pot still whiskey by working men in Dublin, 12083–12087, 12093, who can buy it when four years old at 3½d. per glass, 12151–12157.

Patent still product: Witness's firm only uses this for fortifying wines and cordials, 12041–12043, and it is not called whiskey, but grain or patent still, 12047, 12048. It is only sold for financial reasons, chiefly by doubtful firms, 12040, 12049–12051. Witness thinks that the bad results of drunkenness which arise after drinking the cheap whiskies sold at shebeens, fairs, etc., are due to new patent still spirit, 12052–12062, 12066, 12084, 12112, 12113, 12123–12150, although he admits that the spirits sold at these places are probably the lowest class of patent still spirit, 12146–12150. Witness is decidedly of opinion that patent still spirit is more intoxicating and exciting to the brain and nerves than pot still, 12072–12074; he has confirmed this by experiments on himself, 12074–12080. He cannot, however, quote any individual case of drunkenness leading to violence, which was due to drinking patent still spirit; he thinks he could look up such a case and send particulars to the Commission, 12096–12105. Dr. Connolly Norman, of Richmond Lunatic Asylum, Dublin, gave up patent still spirit in favour of pot still whiskey, but, though witness thinks he has seen this gentleman's statement that he considers the former injurious, he has no real evidence of his views, 12088–12093, 12106–12111.

Blending: Witness tried this with disastrous effects on trade, 12034. Traces the decrease in the Irish whiskey trade in England to the bad name due to blends, 12068, 12118, 12119, 12122. Blending is carried out to a smaller extent in Ireland than in Scotland, and only for export trade, 12067, 12069. The popularity of Scotch blends is probably due to the different character of the whiskey, which is more suitable for blending, 12120, 12121.

JAMESON, Mr. Andrew—

Is a managing director and part proprietor of John Jameson and Son, Dublin, 1373–1375. The distillery has been carried on by this firm since 1805, and is one of the best known in Ireland, 1376–7.

Definition of Irish whiskey: "A spirit distilled in a pot still, which should go through at least two or three distillations, and be made from a mash of cereals grown commercially in Ireland," 1378, 1380–1382, 1586–1588, while distillation must take place in Ireland.

Proportions of materials in mash: Roughly, four-fifths barley and the rest rye, wheat, and oats, 1388, 1391, 1593–1607; though it depends entirely on distiller, and as long as there is enough malt to convert the starch, there need be no fixed amount, 1383–1400. Malted and unmalted grain, 1400–1404. Maize may be used in a pot still, but whiskey would have a peculiar flavour, 1589–1592.

Process of distillation: Description, 1665–1677. Three distillations are absolutely necessary to produce Irish whiskey, 1583–1585. Relation between these processes and fractionation, 1575–1577, 1678–1703. Use of line arm, 1571–2, 1688–1698. The feints never disappear, 1704–1712. Direct action of fire-heat on flavour in opposition to steam jackets, 1577–1579. If naked steam applied it would bring the product outside witness's definition of whiskey, 1650–1654.

When Scotch or Irish whiskey is asked for, customer ought to be given pot still whiskey and not patent still product, unless it is so described by the retailer, 1497–1517; since patent still spirit ought never to be sold as whiskey, 1505; and price paid by consumers is sufficient for them to obtain pure pot still whiskey, 1736–1739; though witness does not say that patent still is deleterious, 1418–1432.

Patent still product is not whiskey, because the essential feature of whiskey is the flavour, produced only from the original or pot still method, 1405; by the bye-products, 1416–17. As the patent still cannot give this flavour, 1713–1716; it does not need the high-class materials that are used in the pot still, and so maize is largely used, 1413–1416, 1431–1441, 1761–1767; and result is a flavourless article, which, if pure, anyone could distinguish immediately from pot still whiskey, 1424–1430. In wholesale trade patent still spirit can only be sold when described as such, 1419–1423. Witness's firm has never taken any steps to prevent sale of patent still product, 1523–1526; though a pamphlet warning the public of the practice of

diluting pot still with patent still spirit was issued by the firm thirty years ago, 1608-1615.

Blending of pot and patent still products lessens flavour of former according to proportions used, and, if blended, ought to be much cheaper, 1442–1458, as pot still whiskey is twice as expensive to make, 1445–6, 1521–1523, 1766. Dilution of "raw" pot still whiskey with patent still might make the former less deleterious, 1659, 1752–1760. Not much blending in Ireland, 1462–1465. If blended or mixed with patent still, blend ought to be labelled as such, with proportions, 1485–1489, 1518–1520. This should be done in bond—with Government label giving proportions, etc.—though this would kill the "outside" blending trade, and it would be difficult to detect alteration of labels after it had left bond, 1529–1550.

Labelling: When casks leave this firm's distillery, they are marked "Jameson's Whiskey" on'y, 1466–1474; there is no distinction between pot and patent still by Excise, 1475, 1480. Witness wants all patent still product to be marked on cask as "Patent Still Spirit," 1476–1482, 1508–9. When this is bottled, it ought to be labelled in a similar manner, 1483–4; this could be done while in bond, where it is often bottled and blended, 1490–1496; though there are difficulties in the way of this, 1527–8.

Compulsory period of bonding: Witness approves of this, 1551–1566, 1736–1739, 1743–1746; as pot still whiskey improves in flavour and value with age, 1556–7. Suggested three years' period for this, 1564. Relative rise in price between pot and patent still products: witness regards patent still products as very nearly pure alcohol or silent spirit, 1617, 1740; but if there are bye-products present, which are necessarily much less than in pot still, it would improve slightly with age, 1617, 1663–4; but, though this maturation might take place earlier in case of patent still, it would not go on improving, as does the pot still product, 1618–1649, 1741–1752.

JANSEN, Mr. Herman—

Is Chairman of Distillers' Union, Schiedam, and member of a firm of Geneva distillers, 14232, 14233.

Definition of Geneva: A spirit prepared in Holland in a pot still, by three distillations at least, from grain, 14239, 14241. Juniper is the principal flavouring ingredient, but other flavours are added according to the taste of the country to which it is to be exported, 14241, 14285–14287. Mash consisting of equal proportions of malt, rye and maize is used, 14292, 14293. Amylo process is unsuitable for making Hollands and is not used, 14294–14299.

Within the last twenty years the practice of mixing silent or molasses spirit with Hollands has seriously injured the trade, 14235–14238, 14242–14258. The local authorities at Schiedam, assisted by the Excise officers, have endeavoured without entire success to check this adulteration by instituting a set of regulations under which the Geneva is made. It then bears a distinctive label, being the town guarantee that it is pure Hollands, 14259–14281, 14288–14291, 14314–14320.

Witness was a member of a Committee appointed some years ago among the distillers in Schiedam, to inquire into the adulteration of Geneva or Hollands, 14234. This Committee decided that it was this adulteration which caused the decrease in the trade in pure Hollands, which has decreased in last fifteen years to about half, both as regards number of distilleries in Schiedam and total production of Geneva in Holland, 14242–14248, 14304–14312.

Popular opinion in Australia, Canada and Holland, seems to show that pure Hollands is beneficial to health, 14282–14284.

KEITH, Mr. Henry S.—

Is managing director of James Keith and Co., Ltd., 9306, founded since 1849, 9305. They have a wholesale and retail wine and whiskey trade, 9302, 9413, with which groceries are also associated, 9307; this latter being an old custom in Scotland, 9308. Witness has had 37 years' experience in wine and whiskey trade with the firm, 9303, 9304. Has been Provost and is Councillor of Hamilton, and is Honorary Sheriff's Substitute of the County of Lanark, 9300, 9301.

Derivation of whiskey: Witness believes it is "uisque beatha," which is a Gaelic translation of the old Scotch name of whiskey—"aqua vitæ," 9311-9313, and was afterwards corrupted into "whiskey," 9314. This title referred to the product, not the flavour, 9506–9508, 9515. Some people trace it from the Irish root "usquebaugh," which is practically the same, 9315–9317. This latter word was first used in the English Licensing Act of 1736, 9318–9320. Burns used the terms "usquebæ," "whiskey," and "aqua vitæ," in one poem, 9321, 9324. Witness always described their whiskey as "aqua," when he was first in the trade, the term "whiskey" coming more into use during the last twenty-five years, 9325, 9326. The term "aqua vitæ" was used in the Statutes during the whole of the eighteenth century, 9327; it was in the transitory stage in the early part of this century, the name "whiskey" not being in common use until the latter portion thereof, 9322, 9323. Witness considers "whiskey" can be determined if the components of "aqua vitæ" can be arrived at, 9328, 9397, 9398, 9515, though he admits that "aqua vitæ" was a generic term for all strong spirits, 9509–9518. Conclusion might be upset if it were proved that "aqua vitæ" and "whiskey" were not synonymous, 9455, 9456.

History of distillation: Witness gives the Commission an appendix prepared by him on old Licensing Acts, 9309, 9310, 9583. Witness believes that from quite early days until the year 1828 "aqua vitæ" was not the exclusive product of malted grain, 9380, 9381, 9161–9465. This was conclusively proved by the Acts of 1579, 9329–9331; of 1695, 9343–9346; of 1700, 9342, 9354–9356; of 1793, 9358–9360; of 1798, 9574–9576; of 1803, 9368, 9369; of 1806, 9370–9374, 9450, 9451; and of 1823, 9375, 9376, and is confirmed by the reports of Select Committee of 1798 and 1799, 9452, 9453. The terms "bere and bigg" used, signify a species of barley; the cereal as it first appeared. Witness considers barley is an improved form of "bere," got at by cultivation, 9332. These are, however, treated by the Statutes as two distinct cereals, 9332–9334. The first excise was in 1644, and the materials used for manufacturing "aqua vitæ" were not specified, 9335, 9336. The next one was in 1655. A duty of 2d. a gallon was placed on all "aqua vitæ," or strong waters blended or distilled in Scotland, 9337. Again, no mention is made of choice of materials, 9338. The Statute of 1661 left the choice of materials open, 9339, though a differential rate was imposed in favour of malt, 9340. This continued until 1695, 9341, 9348, 9349, when the previous malt duty was repealed, 9347, 9350, 9351. Witness thinks the foreign tax on spirits was collected from the retailers, and the tax on materials from distillers, 9352, 9353. He considers that from evidence of Statutes of 1736 and 1751 alone it might be argued that "aqua vitæ" was made solely from malt, but 1793 Act shows that spirits were also made from corn, etc., as well as malt, 9357-9. Witness was not aware of any other spirit in Scotland being called "aqua vitæ," except our present whiskey, 9361. Brandy was so called when first introduced, but "aqua vitæ" was afterwards applied to spirit made from malt, 9362. The Wash Act of 1784, which ran for two years, provided for a duty to be placed on the fermented wash or wort, 9363–9366. From 1784-1816, Highland whiskies (which were called spirits, 9385, 9386) were not allowed to be sold outside the Highland district, 9383, 9387, 9395, 9396, though Lowland whiskey was obtainable in the Highlands, 9395, 9396. This prohibition was probably for the purpose of encouraging local agriculture; presumably cereals were used, both malted and unmalted, 9388, 9389, 9450, 9451, 9453, 9454, malt being most largely used in the small stills, 9390. After 1816, no differentiation was made in Statutes between the Highlands and the Lowlands, 9377. The Act of 1823 refers only to Scotch and Irish whiskey, 9375–9379. Witness considers the real introduction of improved methods dated from the Act of 1816, 9399–9402; though a new improved form of kiln was invented by Eustatius Roghe in 1599, 9403–9404, which shows that improvements were encouraged, 9405. Witness states that there is no record of the word "whiskey" in the Statutes up to 1823, 9391, 9392. Evidence goes to show that Lowland whiskey was also distilled from grain as well as from malt, 9393, 9394. Witness has no knowledge of the amylo process of conversion of the mash, 9459.

Definition of whiskey: This should be manufactured in Scotland or Ireland from cereals, whether in pot or patent still, 9411, 9412, 9424, 9435-

9438, 9479, 9509, 9577, 9579 (the conversion to be done by malt, 9457, 9458, 9572, 9573, though witness would not press this latter point, 9460), and should be legislated for and controlled by Excise, 9439–9448. Spirit made otherwise than from cereals should not be used for consumption, 9446, 9447; this in the interests of the consumer, 9448. Witness considers if a satisfactory whiskey, having the characteristic flavour of Scotch whiskey, could be manufactured from sugar or by a new method in Scotland, it might be called "Scotch whiskey." Any difference in flavour would be immediately detected by consumer, 9519–9534, 9564–9571. Witness considers if it were to be defined, the definition should be found in the mash, and not controlled by a chemical standard, 9560–9563. To be called "whiskey," it must have the characteristic flavour of whiskey, 9509, 9510, 9567, 9568. If whiskey sent to London were over proof and diluted to 25 under proof, it would not lose its character of Scotch whiskey, 9580, 9581, 9583.

Blending: Witness is in favour of this, 9414, 9415. He considers the question of proportion is sufficiently met by supply and demand; more malt being used in blends in the West than in the East of Scotland, 9416–9420. Witness says that their sale of Scotch whiskey has increased abroad since the introduction of blends, 9471, 9472. He does not think people outside Scotland associate the flavour of malt whiskey with the name "Scotch whiskey," 9473. Witness would not call a blend of Scotch malt and English grain "Scotch whiskey," 9486, 9487. Preference in England for Scotch blended whiskies, 9535, 9538, 9539. Witness's firm blends Irish whiskies. They never blend with an Irish whiskey anything but Irish produce, 9556–9559.

Patent still whiskey: No objection raised in the trade as to this being called "whiskey" or "Scotch whiskey" until the Islington case, 9410. The question was mooted in the Committee of 1891, though witness had not heard of it, 9425. Prejudice against the patent still when first introduced was merely one of taste, 9421–9423. Patent still whiskey is not necessarily grain whiskey, malted whiskey being made in both the patent and pot stills, 9431–9434; though the term "grain whiskey" is commercially applied to patent still products, 9431. No unblended pure patent still is sold by witness's firm in England, 9540. They have never had blends returned to them, though pot still was, on account of its flavour, 9536, 9537. Witness considers patent still has the characteristic flavour of "Scotch whiskey"; this is borne out by the demand for it in Scotland, 9541. Difficulty of preventing fraud in England by selling other patent still spirits as "Scotch," 9542–9545, 9554, 9555, though witness does not think this is at present done, 9546. Witness believes patent still whiskey is principally used for diluting purposes, 9578.

Butter: Analogy of artificially prepared butter, 9492–9501. He considers it quite correct that margarine and milk blended butter should be specially described, 9502–9505.

Brandy: Witness thinks this also should be decided by considering what brandy was, 9466. A distillation of malt and corn was formerly called brandy, 9467, but now it is admitted to be solely the product of grape juice distillation, 9469, 9470. In the Spirit Act of 1864, a compounded preparation of spirit was described and sold as British brandy, but witness considers this description is erroneous, 9468.

Irish whiskies: Witness considers pot still whiskies have their own distinctive flavour, and can be distinguished from Scotch whiskey by the consumer, 9474–9484. He does not think he could distinguish between Irish and Scotch grain whiskies, the distinctive flavour not being so marked, 9485; nor could the ordinary consumer, 9547–9551. If the latter were accustomed to a certain kind of whiskey, he would detect the difference if a change were given him, 9552, 9553.

Labelling: This should not be compulsory, though witness considers that if whiskey be labelled, it should not be a fictitious description, 9488–9491. At the present time, the produce from distilleries is sold to the trade with the name of the distillery, and the wholesaler would know what he was buying, 9406–9409.

Materials: The Corn Laws restricted the production of whiskey to home-grown cereals, but after their abolition any satisfactory cereals were allowed, 9426. Maize was rarely used owing to the duty thereon; after 1844, however, the tax was removed, 9427, 9428. Witness does not object to use of maize, 9430.

Protection of legitimate trade: Witness is in favour of this, 9564.

KELLY, Mr. F. J.—

Represents Messrs. Booth, Rectifiers and Compounders, London, 13234–13238.

Gin: A spirit distilled from corn, doubly rectified, and flavoured by distillation with juniper berries and other herbs, 13239–13252. Witness considers the cheap gin made any other way should be distinguished in the interests of the consumer, 13279–13285. He considers double rectification essential, although it is not universally done, 13275–13278. Witness believes the nearer gin approaches pure alcohol, the better it is, provided it is properly flavoured, 13289–13291. He agrees that English and foreign gin cannot be mistaken, 13286.

Maturation: Witness's firm finds gin is improved if spirit kept for some time before rectification, 13253–13260. They experimented with bonding gin, which requires to be rectified again afterwards, this improved the gin, but the experiment proved too expensive, 13261–13267.

Witness's firm does not concur with suggestion that Section 69 of Spirits Act, 1880, permitting sweetening and colouring in warehouse for export, should be repealed, but recommends that distillers should be excluded from the clause if they desire it, 13268–13273, 13292–13294.

Analysis: Witness had their gin tested some years ago showing absence of ethers and other bye-products, 13287, 13288.

LYON, Mr. John—

Is a licensed grocer, and has carried on that trade for 31 years, is director of the Scottish Trade Protection Society and chairman of the Grocers' Section of the Scottish Licensed Trade Defence Association, 9585–9588. Business in west of Edinburgh, 9598. Retails any whiskey demanded, but very little Irish, 9591–9597. Was disappointed in sale of "John Jameson" whiskey, 9594, 9688, has not tried to sell Irish blends, 9691. More demand for Irish whiskey in West of Scotland, 9599. No great trade in pure grain whiskies, 9613, 9614. Very little demand for self whiskies, 9625, 9626, 9684–9687, 9689, 9690. Whiskey sold by witness in any quantity, but not for consumption on premises, 9672–9674, does not bottle in bond except for abroad, only blends in bond, 9677–9679. It would be no great advantage to witness to add water in bond, 9680–9681.

Blending: Witness has been in the habit of blending for 29 years, 9590, small trade in proprietary blends, 9600, 9601, witness's trade is mainly in own blend, a blended Scotch, malt and grain, Highland with Lowland, 9602–9607, percentage of blends, 9608–9612. Tendency to improve these of late years, 9615, blending formerly little done, 9616. Difference between mixing and blending, 9617–9620. The advantages of blending in bond to dealer, retailer, and consumer, 9623, 9624, 9627–9630. Increasing demand for blends, 9692–9694, is not due to cost, 9702–9706.

Public taste in whiskey is steadying, 9695–9697, but has not gone as far as in brandy because of the many different blends, 9698–9701.

Maturing: Witness thinks this a distinct advantage for all whiskies, 9658. Increased demand for well-matured whiskey, 9621–9622, age of blend calculated by average, 9633–9636. Is in favour of age limit, and thinks from experience that any whiskey under two years old is injurious to health, 9649–9654, 9659.

Labelling: Witness labels all his whiskies "Scotch," 9637–9641, 9675, 9676, does not think it necessary to mention whether they contain malt, 9642–9644. Thinks the name "Scotch" ought to mean "made in Scotland," 9645, 9646, and from cereals, 9647, 9648; only declares strength of alcohol in one case, 9682.

Duty: This should be levied according to age of spirit, 9655–9657, effect of this on the revenue, 9660–9671.

MACKENZIE, Mr. Thomas—

Is Chairman and Managing Director of the Dailuaine-Talisker Distilleries, Limited, and represents the North of Scotland Malt Distillers' Association, 9043, 9044. Distilleries under his control are the Dailuaine-Glen Livet, Imperial Glen Livet, Talisker Distillery, Island of Skye and the North of Scotland Distillery at Aberdeen, until it was burnt, 9045. Dailuaine-Glen Livet whiskey is pure malt pot still whiskey, 9046. Product of distilleries sent to dealers and blenders at home, sold chiefly for blending but considerable quantity sold as self-whiskey, 9047, 9048, 9106–9108, which can be bought in London, 9109.

Definition of Scotch whiskey: Witness thinks this ought to be made in Scotland from cereals not necessarily indigenous to Scotland with malt for conversion, 9055–9057.

Materials used in production of whiskey: Witness approves of not less than 30 per cent. of malt in mash, though he believes grain whiskey has been made without malt at all, sulphuric acid being used in conversion, 9085–9087. He suggested 25 per cent. to 30 per cent. because he believes grain distillers of Scotland are willing to agree to that limit, 9088–9090. Malt is used by some distillers for yeast production, 9091, never less than 25 per cent. being used in witness's grain distillery, 9092.

Blending: Witness has no objection to blending pot still and patent still whiskey, 9049, but has definite views as to the description to be affixed to self-whiskies and blends, 9050. He thinks that if a minimum of pot still whiskey in a blend (25 per cent. or 30 per cent. being about the minimum now used) were fixed, it would be an advantage at present, but he could not answer for it in the future, 9058–9064, 9098, 9099, he recognises the difficulty of fixing a limit, 9110.

Maturation: Witness strongly advocates compulsory bonding both for pot and patent still, for at least two years, for reasons of health, as new spirits are more intoxicating and less palatable, and equality of standard is advantageous to the trade, a large quantity of raw grain spirits are drunk in the poorer parts of towns, 9065–9073. Maturing being an essential factor in good whiskey, 9100. Witness is in favour of the reduction of spirits in bond, 9074, but does not approve of operations allowed there being different for exportation and home consumptin, 9134–9137.

Labelling: Witness approves of labelling Scotch whiskey as either "Patent Still Scotch Whiskey" or "Pot Still Scotch Whiskey," 9051, 9052. Blends should be labelled "Blended Scotch Whiskey," 9054. He thinks it would be a guarantee to the public and the foreign purchaser if a permit were granted by Excise, as a certificate of quality and age of spirit, 9075, 9076, 9119, 9120, though it would be no protection as to flavour, 9121. In obtaining goods from bond for home consumption the permit would be sufficient if whiskies were differentiated, a great advantage to the retail trader and in time to the ordinary consumer, 9077–9084, 9101–9105, 9129–9133. Suggestion that as a protection to Scotch whiskey all blends might be labelled with name of blender as proprietary blends, and make their own reputation by their flavour at home and abroad, 9111–9117, 9122–9124. Scotch malt whiskies are relied upon, but cheap blends bring discredit on the name, 9118.

Patent still spirit: No objection to this being sold by itself as Scotch whiskey, 9053. Witness thinks that a certain amount of malt in the mash of patent spirit improves its flavour, 9093, 9094. Style of these spirits very much alike anywhere, could be easily substituted, in no case could Irish pot still be substituted for Scotch pot still without altering entirely its character, 9095–9097.

Exportation: Whether this is done in bottle or in bulk depends on foreign demand. Australia and America especially preferring to do their own bottling, 9125–9128.

MACKINLAY, Mr. James—

Senior member of Charles Mackinlay and Co., distillers and blenders, of Leith (Distillery, Inverness), established 1867, 7563–7566. Large English and export trade, 7570–7574. Also hon. secretary of Edinburgh and Leith Wholesale Wine and Spirit Dealers' Association, numbering 80 members, all dealers and blenders, having invested capital in whiskey trade of nearly £4,000,000, 7567–7569.

Introduction of Scotch whiskey into England 1860, 7598, 7599.

Witness considers that both pot and patent still spirit made from cereals in Scotland and containing 25 per cent. to 30 per cent. of malt should be called "Whiskey." 1576–7580, 7622, 7639.

Blending: "The Hotel, Innkeeper, Vintner and Spirit Dealers' Assistant," published 1825, showed similar blending to now, mixture of light and heavy whiskey both made in a pot still. Witness said now malt whiskies could be used same as patent still for blending, to give lightness, 7587–7596, 7644–7649, 7686–7688. Necessity for care in blending, objects to composition of blends being on label as it would be misleading to public and unfair to blender. Few restrictions necessary as dealers would use only Scotch whiskey if understood that only whiskey made in Scotland could be sold as Scotch. Witness can recognise blended Scotch whiskey but possibly not pure Scotch grain from English or Irish, 7623–7637. Proportions in blends of Scotch whiskey exported to India and Colonies, 7657–7662. Blending a matter of education, 7603–7605. Minimum age of pot and patent still whiskies in witness's blends, 7669-7673.

Patent still spirit: Witness would not, unasked, sell or export this as Scotch whiskey, 7640–7643, 7663, 7664. Cheap whiskey is mainly patent still product and is sold largely, chiefly in cask, and with a distinguishing mark, 7680–7685. It improves with age in a shorter time than malt spirit, 7581–7584.

Whiskey not sold largely on the Continent, mostly bottled, proprietary brands, 7600–7602. Witness objects to mixing of British and foreign spirits for export, 7606, 7650–7655.

Compulsory bonding: Does not approve of this. Its liability to give undue advantage to gin, 7609–7614.

Witness has no knowledge of Irish blends or trade. Does not consider Scotch blends have displaced Irish pot still in the English market, 7674–7678.

M'CALLUM, Mr. John—

Is resident at Kirn, Argyllshire, 11978 From 1845 to 1874 witness was practical malt distiller at Hosh Distillery, near Crieff, Perthshire, 11979, 11980; since then witness has advised and reported on distilleries in Scotland, Ireland and Sweden, 11981, 11982. Although, as Mr. Tedder stated, a declaration of the cereals used is made by the distiller, anything, if it be a liquid, may be added before it passes into the mash tun without the knowledge of the Excise, 11984.

In 1858 fines of £450 were imposed for selling grain spirits as malt, and in that year the description "Pure Malt" on Excise permits was given up, and all were marked "Plain Spirits," this being a great blow to the whiskey industry, 11986, 11987. In 1857 a Bill for compulsory bonding of grain spirits was defeated owing to the exertions of the grain distillers and spirit dealers, 11987. In 1825 the Government divided the distilleries into Highland and Lowland by a line from the port of Monteith to the East Coast of Scotland, though this only continued for two years, 11988–11991. Witness considers that only in the pot still product is there the full aroma of whiskey, 11986, 11987, 11992.

Raw whiskey: Some years ago witness was prevented drinking this at a grain distillery by being told that it would kill him. When he insisted on tasting it he was compelled to expectorate immediately afterwards and to drink water, 11984; does not think that this was because it was 65 over proof, but because of the vitriol present, 11993.

Vitriol: Witness knows this was used in patent still distilleries in the sixties, 11985; he was then told by a grain distiller that he used about forty tons of vitriol a week. This was also confirmed by a medical man in Bristol at that time, who commented on the post-mortem appearances of drinkers of cheap whiskey, 11994–11996. Witness thinks it is still used to a certain extent actually in the mash, and not only for cleaning and other similar purposes. It gives a bite to the whiskey and is very deleterious to the consumer, 11997–12030. Mr. Bramall does not think it is used

now, and Dr. Buchanan has only seen it used with molasses spirit for methylation and cleaning, 12016, 12017.

McDONALD, Mr. John—

Is senior partner in Ben Nevis Distilleries, Fort William, 6943; was chairman of Central Malt Distilleries' Association, and represents the East, South and West Association, 6945–6947, and is solely interested in malt distilleries, 6948, 6953. Witness has had 23 years' business experience, 7038.

Definition of Scotch whiskey: Whiskey made in Scotland from cereals, conversion to be by malt and not acid, 6955, 6991, 6992. Witness has no experience of cereals other than barley malt, but would object to spirit made from molasses, 6956, 6957. Scotch whiskey to be typical should contain a certain proportion of malt whiskey, 6958–6960, 6973, which proportion should be as large as possible, without interfering with the sale of whiskey, 6962, 6963; this in the interests of the distiller, 6964. Witness thinks pure grain whiskey is not a characteristic Scotch whiskey, 6990. He would not exclude it from being called "Scotch Whiskey," as it always has been so known, 6959, 6961, 6988, 6989, 7017, and malt distillers can afford to ignore the competition, 7018–7021. Witness recommends that cheap spirits should not be called "Scotch Whiskey," but does not see how a line can be drawn, 7023–7026.

Labelling: Witness agrees to free action regarding this, not legal restriction, 7011. He is opposed to labelling, 6974–6981, 7007–7011 (*a*) because a fine malt whiskey might be put on a level with inferior malt, 6974, 6975, and (*b*) a fine blend might be classed as inferior to either common malt or a common blend, 6976–6978; though the Civil Service and other stores do differentiate in their labelling, 7011, 7012.

Compulsory bonding: Witness is in favour of this. Suggests two to three years, 6965–6967, which would make the whiskey more palatable and wholesome to the consumer, 6968, 6969, 7022, and would prevent exportation of German spirit to America and elsewhere as "Scotch Whiskey," as at present done, 6970, 6971.

Malt whiskey: Witness considers this adaptable for consumption in the Highlands, but finds a blend is preferred further south, 6950–6952, the young malt being too strong, 6985. This is contradicted by Messrs. Gilbey and Pheysey, who almost exclusively sell malt whiskey, 6950–6952, the latter says, "including all classes of the community," 7032. Malt should not be sold as pure malt, unless it is matured, the age, of course, adding to the cost, 6984. Witness believes their trade to have been the largest of any Highland distillery in pure malt whiskey, 7002, 7003. Their methods for making this have not varied, but public taste has altered, 7004, 7006, 7041. Less peat used than formerly, taste for smoky flavour having changed, 7005. Formerly larger trade in pure malt whiskey than now, 7039; diminution, because public will not give a price which will enable them to get pure pot still of the proper age, which is not highly flavoured, 7041, hence the idea that pure malt whiskey is too full flavoured as a self-whiskey, 7027, 7033. Witness's firm sells their very oldest Highland malt at 60s. per cask of two gallons (or 5d. per glass), which makes a perfect self-whiskey, but the consumer expects to obtain his for 42s. a cask, 7033–7035, though he will pay 6d. a glass at a hotel and obtain an inferior whiskey, 7036, 7037. Slight trade increase lately, people now giving higher prices for whiskey, 7040. Irish pot still as a self-whiskey also improves with age, 7031. Lowland malt takes less time to mature than Highland malt, 7028.

Blending: Highland malt whiskey is used more for blending than Lowland, the latter being lighter, 7027–7029. Witness considers Highland malt blend infinitely superior to a pure Lowland malt, 7030. The whiskey from their Ben Nevis distilleries is principally sold for blending purposes, being a full-flavoured one, 6999–7001. Witness states that decrease in the single whiskey trade has increased his firm's trade with blenders, 7042. He considers the consumption of Scotch whiskey has increased enormously, 7043. Witness believes that to stop the blending of whiskey would be disadvantageous to both trade and public, 7044.

Flavour: Witness believes that flavour in Scotch whiskey is derived from Highland malt, 6949, 6986. Witness considers grain whiskey as made in Scotland is chiefly used for diluting the flavour of the Highland, 6987. Patent still spirit is very lightly flavoured. Witness's experience is only slight, but he considers Irish and Scotch patent spirit would taste much the same, 7013–7015. Great difference in the case of pot still, 7016.

Standardisation: Difficulty of establishing a proportion of malt, owing to difference in quality, 6982, 6983. Witness is opposed to minimum of malt in mash, 6993, 6994, 6997, 6998, though this would not affect him as a malt distiller, 6996, 6997. An occasional check from Excise would not be an efficient restriction and would probably only hamper the high-class manufacturer, 6995.

Export trade: Only a small one, this was reduced when blends were introduced, 6954.

McEWEN, Mr. Daniel—

Is senior partner of the firm of D. and J. McEwen, licensed grocers and wine merchants of Stirling, who have seven branches in Stirlingshire, Perthshire, and Inverness-shire, firm is of one hundred and four years' standing and witness has been in the business over fifty years, 9842–9845, chief trade being high class family trade, 9846. Majority of whiskey sold being blended Highland and Lowland, not self whiskey, 9847–9849, a quantity of grain being used for cheaper blends, 8950. Sells a good deal of a special old malt whiskey as guaranteed in price list, 9875–9878, 9934. Some customers will only drink pure grain whiskey, 9881. If either kind of whiskey is specially asked for it is always given, 9855, 9856. Brandy trade has greatly decreased in favour of whiskey, owing to better quality of whiskey, 9882-9884.

In witness's opinion term "whiskey" applies both to patent still and pot still, 9851-9853, analogy between whiskies and sugars, 9854, 9855, objects to spirit made from molasses being called whiskey, 9887. Definition according to old books, 9911–9914.

Blending: Witness thinks the prohibition of this would ruin the whiskey trade, 9857. Sale of blends with preponderance of malt increasing, chief sale being of 20 per cent. grain and 80 per cent. malt blend, 9858–9860, 9879, 9880. All good blends are blended in bond in Glasgow, cheaper ones in cellars, 9862–9866, no account kept of the blending of the cheap kinds, though it could be done, 9867, 9868. Witness keeps some of the proprietary blends in bottles, but does not advertise them, thinks own blend better, 9869, 9870. Customers sometimes ask for a special blend or special self whiskey, 9930.

Labelling: The standard for this should be geographical, 9885, 9886, 9915, 9916. Self whiskies labelled with name of distillery 9888–9891, approves of labelling them "malt" and "grain," and in the case of blends as "grain and malt" or "malt and grain" according to preponderating ingredient, 9892–9894, objects to indicating proportions, 9902, but is always willing to tell purchaser, 9931–9933. Witness thinks labelling would be a protection to the buyer but chiefly to the trade, 9895, 9896, and thinks it should be controlled by Excise officer, 9903–9906. Objects to blends from different countries being called Scotch or Irish, should only be called "blends," 9917–9924. Analogy between labelling of whiskey and coffee, 9897–9901.

Maturing of spirit: Average age of blends between four and twelve years, seldom sold under four years, 9871–9874. Thinks the age limit of two years should apply to all spirits, 9907–9910. Wines, as well as spirits, being improved by maturing, 9925–9927, this applies to a good many other things, 9928, 9929.

Blueing: The presence of lime in water has a tendency to discolour malt whiskey, but witness has never heard whiskey objected to on account of this, 9861, 9862.

McKECHNIE, Mr. Peter—

Is Senior Partner of Messrs. Bowen and McKechnie, Wine and Spirit Dealers, London, 12328, 12331–12333, and has been 42 years with this firm, 12329; is Chairman of the Off Licences'

Association, and Past Chairman of the Wine and Spirit Association, 12330.

Definition of whiskey: The manufacture should be from malted and unmalted cereals, and the classification should be geographical, 12367–12370, 12373, 12383. Witness would not call a blend of English and Scotch whiskey "Scotch Whiskey," 12372. Witness has no objection to grain whiskey being called "Scotch Whiskey" if made in Scotland, though he personally calls it "Scotch Grain Whiskey," 12384–12391.

Compulsory bonding: Witness is in favour of this, and suggests a two to three years age-limit, 12374–12382.

Pot still whiskies: Formerly more sale in these than now, before introduction of blends, 12334–12341, although the principal trade was in Irish pot stills, 12334, 12335. After Islington case, witness's firm tried to push the sale of pure Scotch malt whiskey all over England and Wales, 12342, 12343, 12346; this, however, was small, as the consumer would not buy it, 12344, 12345.

Labelling: Witness's trade is mostly in bottled whiskies, which bear a label giving description of contents, these labels being a protection to the customer, 12347–12359, 12371.

Blending: Preference for blended whiskies now, these being lighter for ordinary consumption. The proportion sold is large in comparison with self-whiskies, 12360–12366.

McPHAIL, Mr. Peter—

Is a wholesale and retail wine and spirit merchant, Edinburgh, where he does a large business, 5699, 5702, has been in business forty-four years, thirty-three of which on his own account, 5700, 5701, 5725, has always known of the two kinds of whiskey, 5715, 5716, does not now sell any pure grain whiskey, 5711; this was in use when he entered business, 5726. Customers are of all classes, 5733, 5734.

Pot still whiskey: Trade was in pure pot still when witness entered business, 5727, now sells only a small quantity pure, 5712, 5713, knows of no retailers who confine their sales to this, 5721. Pot still is heavier and thicker than patent still, 5755, price about double, 5748–5750.

Blending: Witness has noticed gravitation of public taste towards more silent, or blended whiskey, 5704–5706, 5709, 5718–5720, 5732, favourite being two parts grain and one part malt, 5707, 5753, but proportion of grain is sometimes greater, 5708. Cannot recall exact date blending commenced, 5728. Patent whiskey was at first used sparingly, 5729, usually one part grain and two of malt, 5730, moderated to suit consumers, 5731. Does his own blending and bonding, 5710, 5746, at will, but is regulated by public taste, 5731, 5751, 5752, 5754–5756, 5759, 5760. Lowland malt whiskey is sometimes used in blending, and is cheaper than Highland, 5757, 5758. Witness considers all blends of pot and patent still whiskey made in Scotland are Scotch whiskey, 5717, 5722, 5723, regardless of proportions, 5724. Has noticed no change in effects of whiskey which might be attributed to change in character, 5735–5737, nor of the quantity consumed per head, 5738, 5739.

Maturation: Witness is in favour of minimum bonding of two years for all whiskey, 5739, 5740. Sells none under four or five years, 5741, this supplied against ordinary demands, 5742, 5743, 5745, best class is ten years old, 5741, 5744.

MAN, Mr. F. H. D.—

Is member of the firm of E. D. and F. Man, Colonial Brokers—mainly rum trade—established since 1793, 12992–12996. His firm buys all the Admiralty and Navy rum, 13009, 13010, which is principally patent still, 13036, 13039.

Rum: The residue of sugar fermented and distilled, 13048. Variation in the sale of Jamaica rum (or pot still) and other rums (proof rums or patent still); this is according to crop, though the sale of patent still spirits is steadily increasing, 12997–13002, 13011–13017, 13032, 13037–13041. Witness has no knowledge of any European rums, 13042, 13043. He believes rums are largely mixed with other spirit, when highly priced, 13050. Rum is a very wholesome spirit, 13018.

Jamaica rum: Variation in quality, prices ranging from 3s. to 8s. a gallon, 13003–13006; this is judged by smell, 13007, 13008. Jamaica rum is seldom blended with anything else, 13053. Witness recommends stopping the exportation from Jamaica of product known as "low wines," as its sale here as Jamaica rum is very harmful to Jamaica, 13019–13026.

Flavour: Witness attributes the difference in this between Jamaica and Demerara rum to the soil and different manufacture of sugar, 13029–13031. The "pineapple" flavour is caused in certain soils in Jamaica, by some growth of the cane, 13054, 13055.

Demerara rum: This or West Indian rum is sold here by itself, 13051, 13052. Witness does not consider Demerara inferior to Jamaica rum, though that is the general view, 13030.

Customs regulations regarding imitation rums, 13043–13046, 13049. Witness considers duty on rum heavily handicaps it compared with other spirits, and suggests alteration, 13027, 13028.

Witness disagrees with Mr. Nolan's definition of rum, nor does he think it is the general view, 13033–13036, 13047.

MARTELL, Mr. Edward—

Is head of the firm of Martell and Co., brandy shippers, Cognac, trading principally with Great Britain and the United States, 15028–15036.

Definition of brandy: The English word is the equivalent for eau-de-vie, but, according to the French law, this term could be applied to different mixtures of spirit, 15099, 15100. Brandy, generally, should be a spirit distilled from grape wine, 15101, and Cognac brandy should be a spirit distilled from grape wine produced in the two departments of Charente, 15037–15042, 15102.

Brandy, other than Cognac, is inferior in quality; it is mixed with Cognac, after distillation, and sold largely in France, 15043–15068, where it is sometimes fraudulently sold as "fine champagne," or the best brandy, 15060–15068, 15104–15117.

Maturation: Brandy improves in flavour with age, though new brandy is quite wholesome, 15118–15123; the latter, however, is generally kept for five to seven months before consumption, 15137, 15138.

Pot stills are mainly employed for distillation, 15073–15081. The process is always subject to Excise supervision, 15082–15088, and a certificate of origin is given before the Cognac is shipped, 15088–15091, which certificate accompanies the Cognac exported, 15092–15094. Witness can suggest no other form of ensuring delivery of pure brandy, 15096–15098, though he considers the certificate unnecessary, brandy being sold from sample, with which it must correspond, 15094, 15095, 15125–15132.

The vintage of the year is kept separately, but in bulk, not in cases, 15126, 15127, 15131, 15133, 15134.

MASTERS, Mr. W. G.—

Is a Director of Messrs. W. H. Chaplin & Co., Limited, wine, spirit and liqueur merchants, who are not engaged in manufacture of cordials but only in their sale, 14765–14768.

Witness does not think any restrictions as to materials, etc., used in cordials and liqueurs would be advisable as long as they are not deleterious, 14769. He has no knowledge of use of essences or their properties, 14770–14774. Witness thinks that in case of an article like Cherry Brandy the basis ought to be brandy, not plain spirit, 14795, 14796.

Absinthe: Witness's firm, who are one of the largest dealers in this spirit, only sell about 250 gallons a year, 14791–14794. There is no prohibition as to its use in this country, although there is in Belgium, 14784–14786. Witness thinks its deleterious properties are due to wormwood used in it, 14787–14791.

Witness calls attention to manufacture of liqueurs and cordials from imported fruit fermented in England, thus evading to a large extent duty on imported spirits, 14775–14782.

MEEHAN, Mr. Patrick Aloysius—

Is Member of Parliament for Leix Division, Queen's County, and has been many years member of the All Ireland Traders' Association; was for-

merly Chairman for nine years of Queen's County Council, and has been for thirty-five years a wine and spirit merchant, owning six licensed houses throughout Ireland; he has a practical knowledge of the business, 11161–11167. His trade is principally in Irish whiskey, but to meet occasional demands he procures Scotch whiskey from Dublin, 11168–11173, and regards it as of genuine Scotch origin, 11174, 11175.

Definition of whiskey: The opinion of the licensed trade and public in Ireland, is that Irish whiskey is exclusively the product of Irish malt and unmalted barley distilled in a pot still, 11176, 11178, 11179; this opinion is founded on long-established custom, 11180–11183, 11202, 11234, but witness would not interdict sound foreign barley, although its use is widely objected to, 11205–11207. Witness considers both the process and materials used for the patent still product a bar to its description as whiskey, and would not concede this even in the event of pot still materials being used, 11194–11198. It should be sold as "Patent Still Spirit," 11197.

Pot still whiskey: Witness sells only the product of Jameson's, Power's and Cassidy's distilleries, 11217, at prices of 18s., 20s., and 24s. per gallon according to age, viz., three, five and seven years, and he obtains these direct from the distilleries, 11211–11217, 11223–11227. He admits the possibility of inferior materials being used in the pot still, 11200, 11201, but is convinced that their effect is perceptible, 11199. He believes there are some good pot stills in County Cork, but knows nothing of their trade, 11232, 11233.

Patent still spirit: Witness is aware of the extensive use of patent still whiskey in the United Kingdom, 11177, but though objecting thereto, he can give no points of inferiority in the process; has no knowledge of Irish patent stills, and has no dealings with them, 11201, 11203, 11204. He considers the general public of his district ignorant of the use of patent still spirit, but if aware of its sale they would object on grounds of its injurious effects, which are not produced in pot stills, 11208–11210, 11235–11239.

Difference between pot and patent stills: Witness thinks that this is very marked, 11187, 11188, as may be gathered from cost of production, viz., pot still 3s. 2d., patent still 10d. per gallon, 11194, but does not think public could discriminate, 11186, 11237.

Blending: Witness sells only unblended brands, but blends of these are made, 11218–11222. The bulk of the whiskey drunk in Ireland is unblended, but he considers some standard blends are pure, those between pot and patent stills, however, being inadmissible, 11184, 11185, 11189, 11191–11193, 11228. He places the origin of the practice with the blender in desiring to increase profits, rather than in public taste, 11190. Witness knows nothing of Scotch blending trade, 11229–11231.

MITCHELL, Mr. William C.—

Has been Managing Director since 1894 of Mitchell and Co., Belfast, London, Glasgow and Dublin, whiskey blenders, etc., founded in 1871, and was previously the secretary, 11240–11248; their turnover amounts to 500,000 gallons, and they trade largely with England and Scotland and moderately with Ireland, also with foreign parts, 11249–11257; in England the trade with public-houses is large, and is conducted by sample, 11401–11404.

Description of whiskey: Witness is not an expert on whiskey, but regards it as alcohol mixed with water, the limitation of "Irish" being geographical and climatic; he can, however, distinguish between the various pot and patent stills, 11258, 11267, 11314–11317, 11330–11333, 11367–11371; the trade value of whiskey lies in the acceptability of the flavour, dependent on the process of distillation and age, 11260–11266, 11268–11271, 11306. He does not oppose classification or labelling provided the proportions of blends are not insisted on, but he anticipates difficulties in the way of accuracy and possible misleading of the public, 11318, 11345, 11346, 11363–11366, 11409, 11480–11487; he gives, however, his suggestions if this is to be adopted (*a*) regarding nomenclature, 11432–11439; (*b*) methods of labelling whiskey in its passage between distiller and public, for the protection of the latter, 11440–11479. He thinks in certain cases in the retail trade protection is necessary, but the means are inadequate, 11489–11495. Witness regards the reputation of Irish whiskey as built up by blends, 11319–11321. He considers the spirit sold by Mr. Wells, prior to the Islington case, as whiskey, and might be exported as such, 11405, 11406, 11410, 11411; in cases of exportation to Australia a declaration is required, but such spirit would enter if of two years' maturation, 11412–11414. He does not agree with the last witness that the Irish public is inclined to reject the patent still product, 11421, 11428.

Pot still whiskey: Witness has made unavailing efforts to push this as a self-whiskey, 11294.

Patent still whiskey: This maintains a large output in Ireland, chiefly in the North, in Dublin and in Cork, and is sold as whiskey, 11372–11379, and witness considers it should pass as Irish if distilled in the country, 11305; his firm has always sold it as "Whiskey" or "Grain Whiskey," 11429–11431*a*; it has a distinct whiskey flavour, 11313, and witness thinks that even as a self-whiskey, as also with the Scotch Cambus patent still, it might command a wide patronage, though such sales are at present small, 11295–11301, 11307, 11323–11329. He is only acquainted with Irish stills and would restrict their materials to the use of grain, 11286–11290, 11337–11339.

Difference between pot and patent still whiskey: Proportions of alcohol and water are not sole causes of the difference between pot and patent still, 11259; patent still whiskey possesses a strong individual flavour, which renders it independent of pot still for blending, 11272, 11273, 11276–11279, 11291. The higher market price for pot still is due to the expensive process, 11274, 11275. He does not know whether the Irish public is aware of the difference, but in some districts they are aware of its use, 11422–11427; he considers them indifferent in the matter, 11488.

Blending: Witness considers blending a legitimate and wholesome practice, 11341, which is not followed merely for economic motives, 11342; the sales of his firm are practically confined to blends, 11280–11282, 11292, 11293, 11296, 11304, 11308–11311, 11380; reasons for popularity, 11283, 11297, 11312, 11340. Blends vary in the amount of pot still used and the age of both factors, 11298, 11300, 11357–11361; the best are 90 per cent., 80 per cent. and 70 per cent. pot still, selling from 6s. 6d. per gallon to 2s. 6d. for cheapest class, 11299, 11302, 11322, 11355, 11356, 11362, 11381–11386; the more necessary factor is the patent still. Blended whiskey, owing to use of pot still, commands higher price than patent still, 11284, 11285, 11303. Blending pot and patent still whiskey commenced about thirty years ago, but witness believes Dunville's have blended in Belfast for over 100 years, 11323, 11336. Witness considers retailers might give publicity to the class of whiskey vended as well as to the fact of inferiority of strengths, 11407, 11408.

Compulsory Bonding: Witness gives reasons why this would serve no useful purpose, 11343, 11415-11420; he is also opposed to standardisation, 11344, 11347-11349. All Irish patent still spirit improves with maturation, 11334, 11335; pot still for blending is kept for three to five years, 11343.

Brandy: Prior to the brandy case the trade custom did not as now insist on a guarantee, 11388, 11393, 11394, 11399, 11400. Witness was not aware that pure grape brandy could be bought under 4s. 6d. per gallon, but has been offered this: "Ethers over 100, guaranteed pure grape"; by French firms at 2s. 10d., he has not had it tested, but doubts its potability, 11350–11354, 11387, 11389–11392, 11395–11398.

MOLTZER, Mr. C. N. J.—

Is principal partner in firm of Messrs. Erven Lucas Bols, Amsterdam and London, manufacturers of liqueurs, cordials and gin, and is also a member of the Chamber of Commerce of Amsterdam, 14879–14883.

Manufacture of liqueurs: These are made by distillation, infusion and the use of essences; the last method only being used where absolutely necessary as in case of "Crême de Menthe." Witness never uses chemical essences, which are bad, though not necessarily injurious, 14884, 14885, 14910–14920. Cherry brandy should be the direct infusion from cherries with pure grape brandy, 14930. For some liqueurs witness uses rectified spirit, 14890, 14935–14937. Witness does not think it advisable or possible to

require a declaration from manufacturers of materials, etc., used in manufacture of liqueurs, 14886–14888. His manufacture is conducted with duty-paid spirits, and is not under Government supervision, 14889, 14891.

Old Schiedam, which is not a liqueur, is made by distillation of malt juice with juniper berries and not with rectified spirit, 14896-14898.

Labelling: Witness considers that the municipal labelling and supervision, if still in existence in Schiedam, is entirely inefficient and unprotective, 14921–14925, 14947–14950. It is not necessary to distinguish between different kinds of Hollands, as this is sufficiently done by price, 14925–14929. Witness's labels are sometimes pirated, but usually he could distinguish his own product by taste and smell, 14951–14957.

Maturation: Witness does not think that compulsory bonding is necessary, as firms like his own, who are jealous of their reputation, always keep their product for at least six months before selling it, 14891–14893, 14938, 14939. He does not agree with Mr. Clark's statement that gin does not improve with age, 14894–14901.

Rum: Witness imports this from West Indies for his own home trade only, 14940–14946.

Absinthe: This is made in Switzerland and France, although its use is prohibited in the former country and in Belgium, 14963–14969.

MOONEY, Mr. Gerald—

Is Justice of Peace for Dublin, 2107, and Chairman and Managing Director of J. G. Mooney and Co., Limited, Dublin, Belfast and London, 2180; retailers of whiskey, 2109, 2110 (through proprietary licensed houses, 2111, 2112); selling principally Irish whiskey, 2113; upon which he is an expert, 2163.

Irish whiskey: Defined as whiskey made from malt and unmalted barley, 2114, and other substances indigenous to Ireland, 2116, and distilled in a pot still, 2114; in Ireland, 2115. Use of pot still essential for Irish whiskey, 2130, 2133, 2134, 2153, but not necessarily for Scotch, 2142, 2143, 2144. Witness bases his distinction on long public discrimination, 2145; principally due to flavour, 2146; also age, 2147. Does not know whether Indian corn is used in Irish stills, 2131; has heard of this, but thinks it improbable, 2132. Witness considers their trade the most extensive in the United Kingdom, 2148–2151. General demand in Ireland is for Irish whiskey, 2124, 2127, 2129. That Irish whiskey is not popular in England is due to inferior brands formerly sold, and the admixture of patent spirit, 2152; English trade increasing, 2152.

Patent still spirit: Is produced in Ireland, 2154, 2155, and sold as such, 2155, 2156; cannot say whether it is ever sold as "Whiskey," 2157, nor whether there are distillers who produce this solely, 2155. Has heard that intoxication is more rapid through patent than pot still spirit, and after-effects more severe, 2158; cannot substantiate this, 2159; attributes effects to strength consequent upon immaturity of patent spirit, 2164, 2165.

Blending: Witness buys unblended pot still spirit direct from distillers, 2117, 2118, 2120, who sell this solely, 2119, and blend it after a certain number of years in bond, 2118, 2121; with other pot still spirits only, 2122, 2134, 2144; customers aware of this, 2123. Sells some Scotch spirit, 2125, 2126, 2128, 2135, as whiskey, 2136, 2140; buys this from blenders, 2137, 2139, as blended Scotch whiskey, 2160; cannot say whether it contains patent still spirit. Witness does not blend Scotch spirits, 2137–2139, 2141; understands that Scotch pot still requires admixture of some patent spirit for clarifying purposes, 2142, 2143, 2161; relies for this on blender's word, 2161, 2162. Addition of patent spirit to Irish pot still is deleterious, 2161, 2166; owing to excessive strength of the former, 2168, 2169.

Maturation: Pot still spirit seldom used in Ireland under three years of age. Witness never sells it under five years, 2147; does not consider patent spirit improves with age, 2167.

MORRIS, Sir Daniel, K.C.M.G.—

Is Imperial Commissioner of Agriculture for the West Indies, 13659.

Jamaica rum: Witness states that this is divided by Dr. Cousins, Director of Agriculture at Jamaica, into three classes, viz.: That used for consumption in Jamaica, that consumed in United Kingdom, and a highly flavoured rum which is exported to Germany; the two former being practically identical products, 13664, 13665, 13692. Witness does not think the casks are marked in any distinctive manner, 13693–13695. All Jamaica rum is made in pot stills, 13682, and there is no legislation to limit ingredients. The molasses drained from manufacture of Muscovado sugar are used, and give a distinctive character to Jamaica rum, 13685–13691, 13702–13708. Witness has never heard of the addition of extracts, etc., to rum in Jamaica as stated by M. Pairault, and he will, if necessary, produce evidence to refute these statements, 13670, 13671, 13684, 13685; he thinks there is a large trade done abroad in extracts and flavouring for making imitation rum, 13667–13669, 13677. Exportation of Jamaica rum is one million gallons as compared with three millions from British Guiana, 13698, 13701.

High ether process: This has been used by Dr. Cousins for the reinforcement of the ether contents of the highly flavoured rums. He and Mr. Allan established the importance of difference in quality produced by "splitting" and "budding" yeast. The method of symbiotic fermentation affects flavour, 13661–13663, 13672–13678.

Legislation: Witness does not think any legislation with regard to materials, processes, etc., or as regards compulsory bonding, is necessary; the chief point is the retention of the country of origin, 13709–13717. He approves, however, of the action taken in England with regard to mixing of Jamaica product with other rum, 13697.

MURRELL, Dr. William, M.D., F.R.C.P.—

Is Lecturer on Medicine and Clinical Medicine at Westminster Hospital, and is Examiner at University of Aberdeen, 1127–1129; and has written books on action of drugs, including alcohol, 1130. Witness gave evidence for prosecution before Mr. Fordham and on Appeal, 1158.

Increased use of whiskey in medical practice, 1131; chiefly for dietetic purposes, but also in treatment of disease, 1132–1134; it has to a large extent replaced brandy until quite lately, 1178–1187.

Use of whiskey in acute specific diseases, 1135–1138; also as a soporific, 1139, 1207–1211, 1274–1278; and, instead of wine, in cases of goutiness, 1140–1.

Beneficial results are, in witness's opinion, almost entirely due to bye-products or ethers, 1137, 1161–1168, 1188–1191, 1205, 1230, 1238–9, 1254, 1259, 1310, 1323–1338; of which there is 1 gr. present in 1 oz. of whiskey, 1260–1. There has been no investigation of these, 1281–1286; nor have they been extracted and sold separately, 1262–1264. If taken neat they might exert toxic action, 1161–2.

Definition of whiskey: Witness entirely agress with Mr. Bramall's definition, 1159–60. Quotes an American definition (Chittenden), 1170. Experiments by this authority, 1334–1337; reference to his position, 1334, 1372b–1372e.

Witness considers pot still whiskey much better than patent still for all purposes, 1138–9, 1142, 1143, 1146, 1147, 1219–1223; and quotes Sir William Whitla in support of this, 1247. Pot still whiskey is more easily absorbed than patent still, 1143, 1212–1218, 1298–1302. Witness gives patients a whiskey which he knows, though not so labelled, to be pot still whiskey, 1343–1359. Instance of Gilbey's whiskey, 1360–1372a. Witness has often found that where no benefit was obtained from whiskey a blend with a large proportion of silent spirit was being taken, and, on substituting pot still whiskey for this, there was an immediate improvement, 1152–1157.

The older the pot still whiskey is, the better (within certain limits), 1144, 1146–7, 1162, 1234–1237; while "raw" pot still is quite unsuitable for medical use, 1145, 1231–1233; and practice of diluting it with silent spirit is not to be recommended, though if pot still product is new it is less deleterious if so diluted, 1148–1151.

Rectified spirit has little effect for medicinal purposes, 1136–1139, 1199–1206, 1224, 1228, 1256, 1265, 1276–1280. Use of rectified spirit as a therapeutic agent, 1265–1270. Potato spirit used, 1271–1274. Witness has not considered food value of alcohol, 1225–1229, 1303–1305.

Stimulants: Official list of these in British Pharmacopœia includes brandy (and sherry), but not whiskey, 1192–1198; though whiskey is a cardiac stimulant, 1143. Reference to Professor Wood, 1171, though this authority does not mention whiskey apart from alcohol, 1292–1297. Pot still is a greater stimulant than patent still in witness's opinion, 1250.

Patent still spirit: Witness agrees with evidence of Dr. Pavy before the Committee of 1891, when he said that this had nothing of the character of whiskey in it, 1166. Witness thinks that one glass of pot still whiskey would satisfy a man, while he might continue drinking patent still, with bad effects, 1169, 1306–7. Patent still and silent spirit are synonomous terms, 1174–1176, 1321. "Cambus," as an example, 1317–1320. Witness did not know the chemical composition of the patent still spirits he used, 1311–1316. Suggestions that products of patent still should be labelled as "Patent Still Spirit" are of recent origin, 1338–1343.

Maize: Disease (Pellagra) resultant from use of damaged maize in bread, 1163; it is possible, though not proved, that this disease might arise from spirit distilled from maize, 1163–1165, 1240–1245.

NANNETTI, Mr. Joseph Patrick, M.P., J.P.—

Is Member of Parliament for College Green Division of Dublin; was for two years Lord Mayor of Dublin and is ex-President of Trades Council of Dublin, 3017–3020.

Definition of Irish whiskey: A whiskey distilled from barley, malted or unmalted; from grain grown in Ireland, 3021. This is general opinion in Ireland and in England, 3022–3024, 3033, 3034, and witness thinks that if a man were given patent still spirit or a blend he would be imposed upon, 3025, as he does not think it is a wholesome drink, 3026, though he has only once tried a patent still spirit. It was made from maize and seemed lacking in the flavour associated with Power's or Jameson's, 3027–3032.

NASH, Mr. Cornelius Arthur—

Was for some years assistant and latterly manager to Messrs. J. & J. Allingham, wine and spirit merchants, Dublin, 2301–2303. Their trade was retail and private, 2307; chief trade in Irish whiskies, 2308; though they sold a little Highland malt as "Scotch Whiskey," 2308, 2309. They used to blend different Dublin pot still whiskies, 2304, 2305; but never used patent still, 2306. Witness is now a broker in the trade representing foreign houses and dealing in all Irish whiskies, 2310, 2311. He has always sold only Irish whiskey, 2317; has not tried to push its sale, 2319; it is what his customers want, 2318, 2320; they sometimes ask for the product of a special distillery, 2321.

Definition of whiskey: Witness would define "Irish Whiskey" as the product of the pot still, made in Ireland from malted or unmalted barley, with a certain proportion of grain, 2312–2316.

Patent still spirit: Witness regards this as pure alcohol, 2322; but has no practical knowledge of it, or its use for blending, except from other people, 2323, 2324, 2331; but he knows that in some places where this is done, no indication of it is given, either in the price list or on the label, 2332, 2334, 2335; Mr. Gilbey's business being an exception, 2333. Witness thinks in the trade patent still spirit is universally called "Grain Spirit," 2336, 2337.

Compulsory bonding: Witness is in favour of this, for at least two years, 2326, 2329, 2330. Ageing greatly improves the whiskey, new whiskey being very coarse, 2326, 2327; it pays the bonder better to sell it at three to five years old, than at two years, as, after the first two years, loss of quantity decreases, 2328.

Prices: Witness understands that patent still spirits cost 1s. 4d. to 2s. a gallon, 2325. Irish spirits vary in bonding price from 3s. 10d. to 5s.; more according to age, a ten-year-old whiskey being worth 12s. to 13s. a gallon. He does not think patent still spirit would ever fetch that price, 2325.

NICHOLSON, Mr. Richard Francis—

Is managing director of J. & W. Nicholson and Co., Limited, spirit distillers and rectifiers, blenders of Scotch and Irish whiskey, Bromley, 8323, 8358, 8359, 8394.

Definition of whiskey: Any corn spirit made in British Isles, 8512–8517, though there is a spirit made in America called whiskey, 8511. Rectified spirit should not be called whiskey, 8518–8520. Witness would not specify quantity of malt to be allowed, and gives reasons, 8523–8543.

Materials: Witness would like restriction in materials used for manufacturing whiskey. Suggests all cereals excluding rice, latter being too coarse, 8325, 8327–8337. Witness considers restriction on processes of distillation ill-advised, 8326, 8353, and objects to compulsory minimum of malt used in mash, 8338–8348, especially a minimum of twenty-five to thirty per cent., less often used, 8349–8352. Witness would confine production of whiskey to a malt converted mash, 8354–8357. Witness does not think increased legislative restrictions would create the probability of importation of more foreign grain spirits for blending purposes, owing to their shortage abroad, 8497. Differential duty should be increased by Excise, to counterbalance any such difficulty, 8498–8506. Maize usually comes from South America, which witness's firm purchases by sample, 8428–8430

Compulsory bonding: Witness considers this unnecessary, the present plan of supply and demand being satisfactory. He believes the average age of whiskey sold is never less than two and a half years, 8363–8368, 8448–8452.

Grain spirit: Witness has no difficulty in keeping their new grain spirit separate for rectifying purposes, 8455–8457. Grain spirit, as such, seldom supplied to wine merchants or blenders and never to publicans, 8458, 8459. Witness's firm only makes one kind now (though different sorts were formerly made), 8422–8424, which spirit could be utilised either for rectification or blending, 8425. No special minimum of malt used, only amount necessary to secure a satisfactory conversion, 8426; this malt being specially manufactured for the purpose, 8427. No analysis made of the bye-products as compared with Scotch and Irish spirit, 8431. Comparisons as to price prove that witness's firm find themselves undersold by Scotch and Irish spirit merchants even in London, 8432. Witness states that at the present time Scotch and Irish grain spirit is coming into England, though formerly English grain spirit was sold in Scotland and Ireland, 8390, 8433. This might again be reversed, 8434. Witness's firm sell their grain spirit to manufacturing chemists, 8453, 8559, 8560, 8563, who, he thinks, use it as a solvent, 8454, 8564, or in medicinal preparations, etc., 8569, though he is not sure, 8568, 8569. This is the same spirit as is used for blending, 8561, 8562, 8565, 8567, and is not a rectified spirit, 8566. Witness states that their grain spirit is made on the same lines as that manufactured in Scotland and Ireland, and to all intents and purposes from the same class of materials, 8389–8391. Witness considers this is entitled to be called "Whiskey," 8392, 8393, and is even higher class as regards manufacture than Irish or Scotch patent still products, 8445–8447, and considers it improved by ageing, 8444.

Excise regulations: Suggested alterations in these: (1) Extension to export trade of regulation "forbidding mixing of foreign with British spirits for home consumption," although it is never done, 8369–8372, 8412, 8413, 8437–8441, 8494–8496. Reasons for this, 8414–8417, 8510, 8573–8589, 8594–8608. (2) Reinstating of former colour system for permits, *i.e.*, one colour for British spirits made from corn, another for foreign spirits; and it should in no case be permissible to mix any of these by a blend in bond, 8373, 8418–8421, 8551, 8552, 8554–8556. This system was proved unsatisfactory in the past, though witness had never heard of it, 8590–8593.

Blending: Witness's firm blends Irish and Scotch whiskey with English grain spirit, 8394–8399. These are sold as Scotch blended whiskey if blended with Scotch whiskey and Irish blended whiskey if blended with Irish whiskey, 8400, 8401, 8409, 8480-8482, 8507, 8508, 8557, 8558, provided not more than 50 per cent. grain spirit is added, 8509. No information given that English grain spirit has been used in the blending, 8402–8405, though witness

would not object to stating this, 8410, 8411. Witness does not agree that blended Scotch or blended Irish whiskey necessarily means that all the components of the blend have been manufactured either in Scotland or Ireland, 8406, nor was that the opinion of the Committee of 1891, which is his guide, 8406–8408. Witness does not consider that the high-priced Scotch and Irish whiskey necessarily contains more pot still; he knows various cases where they contain more grain than malt, 8468–8470. These would probably be sold to public as Scotch or Irish whiskey, 8471, without any qualification, 8472, 8473. Witness is not in favour of discriminating between different classes of blends, 8553. Different percentages in the various blends arranged to suit public taste, 8570–8572.

Spirits made from other materials than corn (as molasses spirits, etc.). Witness's firm sells this for methylation only; witness has heard of its use for consumption, to which he objects as unfair competition and inadvisable in the public interest, because such spirits are generally speaking unstable owing to impure material, which through decomposition and oxidation causes frequent changes, 8375–8382, 8385, 8388.

Notification on label of composition: Witness objects to this, more especially regarding whiskies sold over the counter and those bottled duty-paid, 8360–8362. Witness states that the title "N.S.S." whiskey is not a description of their whiskey, but the mark of a proprietary article, 8474, 8475. Any description given to this is not done with their authority, 8476–8479.

Irish and Scotch grain whiskies: Some of these are sent to rectifiers and some to chemists in London; the latter probably using them as a solvent in their manufactures, 8544–8548, without rectification, 8549, 8550.

Brandy: Witness's firm supplies this, but does not blend it in bond, 8486, 8487, 8489. This would go direct from bond to larger customers, but would be distributed to the smaller men from the rectifying house, 8488. If brandy was blended with grain spirit in the past, witness thinks it was done by publicans, not by rectifiers or dealers, 8490–8492. Witness does not know the cheapest brandy sold by London publicans, 8493.

Publicans in some cases supplied with all their spirit by witness's firm, 8460. Some they would obtain direct from bond, but the bulk from the rectifying houses, where it is often reduced to meet the strength ordered by publican, 8465, 8466, 8483. These spirits are not further blended, 8484, 8485. This includes Scotch and Irish whiskey, which they receive in several qualities, 8467.

Recalled—

Witness considers that the art of gin making is to arrest rectification at the most desirable point, 13295–13298, 13301. He would insist upon gin being made from corn, 13002. If gin were made in any other way, a declaration should be made in the interests of the consumer, 13003–13006. Difficulty of securing uniformity in gin, each firm making its own variety, 13299.

Recalled—

Origin and process of manufacture of British brandy: British brandy is manufactured in England from alcohol made from corn, and is then flavoured to suit the public taste, 17166, 17167. His firm describes it as "B.B.," and it is a recognised article of commerce, 17169–17171. It is made from pure spirit and is not at all detrimental to health, 17172. He thinks it unnecessary to place further restriction on the material or the processes used, 17179. Neither does he consider it requisite to insist on declarations being made as to the materials, processes of manufacture, or preparation and age of any such spirit, 17183. He thinks that all spirit improves to a certain extent by keeping, 17184. Hamburg brandy is made from corn, 17230. The firm never distil raisin wine or juice, 17234–17236.

Definition of British brandy: Witness suggests "a British compounded spirit, partaking of the nature and flavour of the brandy made in a similar way, and from similar materials abroad," 17188. British brandy does not compete with Cognac, but with imitations thereof, 17190. The actual details of flavour are always considered to be a trade secret, 17192. He holds that "British brandy" is entitled to the term "Brandy," 17241; "brandy" need not consist entirely of grape spirit, 17242.

Flavour of British brandy: This is similar to that of Cognac, 17027. The compounding process is with a view to imitation, 17208–17211. Oils are seldom added by his firm, 17213. Compounding is a trade secret, 17216. No unwholesome ingredients are used, 17220. But there is no control exercised over the ingredients which are used, 17222.

NICOL, Mr. James Monro—

Is Director and Secretary of Thom and Cameron, Ltd., Glasgow, exporters of Scotch whiskey, West Indian rum, British rum and compounded spirits, 14356–14358.

Witness's firm has for 40 years mixed Demerara rum with British plain spirits for exportation to Australia, New Zealand and Eastern Europe, 14360–14364, 14373, 14450. He would strongly object to any alteration in present regulations with regard to mixing spirits in bond, and states that Germany and other countries would take all the trade in mixed spirits if this were prohibited, 14363, 14415, 14416, 14462–14470.

Witness's firm mixes two parts of British plain spirits with one part of Demerara rum, although a much larger proportion of plain spirits might be used, and witness considers that the trade term "Rum," as distinct from the strict definition of rum, covers this compound, 14381–14393, 14410–14424, 14446, which is invoiced as "Red Star Rum," the Customs' mark on the cask being "Mixed" spirits; while for Australia, a declaration that it is the produce of the West Indies and Great Britain, and a two years' age certificate have to be added, 14364–14377, 14425–14432, 14451–14461, 14471, 14472, 14485–14489.

Spirit used is plain spirit made from molasses or cereals in this country; it is sold as "Plain Spirit" or "Grain Whiskey" 14393–14409. Present price of Demerara rum is 3s. per gallon, and that of plain spirit is about 1s. 3d., 14433–14444.

Witness does not know whether a similar compound is sold for home trade, but if so he would regard it as quite legitimate since the compound is perfectly wholesome, 14378–14381, 14447–14449, 14473, 14474.

NOLAN, Mr. James Coneys—

Represents the Jamaica Government as Special Commissioner in the United Kingdom, 12496, 12498, 12500, 12516, 12650.

Jamaica Rum Protection Law: This provides for the appointment of a representative, to prevent imitation rums, etc., from being sold as Jamaica rum in the United Kingdom and abroad, 12499, 12501–12504, 12792, 12793. Such frauds almost ruined the sugar industry in Jamaica, which affected the cost of rum, 12506–12511. The fact that Jamaica was the largest sufferer led to the framing of the law, 12512–12514.

Excise and Customs regulations: A clear distinction is drawn between (1) rum, (2) Jamaica rum, and (3) imitation rum; this should enable witness to trace rum from the time of landing, until it is entered in publican's spirit book, 12583–12593, 12771–12774, 12785. Witness sees difficulty of controlling publicans, but suggests enlarging the powers of the Excise officers, 12786–12789. He suggests that blending in bond of rum with inferior rum should not be allowed, so as to prevent sale of imitation rum as rum, 12604, 12605, 12815–12817. Witness states that these regulations were not enforced in the past, but he believes they are now, 12594–12603, 12609–12617. If other rum were mixed with Jamaica rum in bond, witness would like the bottle labelled, with proportions, 12676–12686. Witness also recommends that the Revenue Departments should allow an official stamp to be put on rums bottled in bond; this to be a certificate of their character, 12618–12638, 12819, 12820. He advises introduction of different colour permits to ensure that the spirit is made wholly in the pot still, 12655–12663. Gradual decrease of importation of imitation rum

since 1899, 12664–12672. Witness thinks that under existing regulations imitation rum can come in as rum, 12673, 12674. Rum is also allowed to come in from France without a certificate of origin, 12675. Witness suggests, although he cannot prove it, that Inland Revenue officers favour the patent still in this country, as it requires less supervision than the pot still, 12702–12714. Witness suggests that local authorities should enforce the Merchandise Marks Act as well as the Sale of Food and Drugs Act, 12790, 12791. He would like the Customs more fully to enforce their powers, and gives an instance of what he considers unsatisfactory action on their part which, however, is exceptional, 12687–12701.

Jamaica rum: This is of a very high class; it contains much more ethers and is more valuable from a health point of view, 12800, 12801, 12813, 12814. The recognition of "Jamaica" rum by the Excise was by a separate order, 12821, 12822. Witness would divide Jamaica rum into two classes: (1) The rum which is consumed in the United Kingdom, this being the same as that consumed in Jamaica, 12715–12722. (2) The highly flavoured rums which are sent to Germany for blending purposes, 12718, 12722, 12725–12746, 12794–12797, and are sold in this country for re-exportation to Germany, 12725. Witness believes that the mixture is sold as Jamaica rum, but he cannot prevent this in Germany, 12732–12735. He finds fault with Mr. Cousins' paper, which divides Jamaica rum into three classes, 12720, 12723, 12724, and also with the statement that manufacturers in Jamaica are trying more and more to produce the highly flavoured rum, of which the produce is decreasing, 12750–12753.

Prosecutions: These are all instituted under the Merchandise Marks Act, 12756. The Board of Trade give all possible assistance in the preparing of cases, although they do not institute proceedings, 12515, 12760-12763. The costs of these were borne by defendants, and expenses were paid both by the planters and the Government, 12517. In two cases, to which the persons pleaded guilty, Demerara rum was mixed with Jamaica rum. The question was one of origin, not quality, 12553-12556. Witness gives place and number of prosecutions instituted by him in London and provinces. All were cases of false trade descriptions and the defendants pleaded guilty, 12557–12561, 12764, 12765, 12778–12783. Witness can only take action for false description on invoice or bottles, 12766–12771. These prosecutions have resulted in increasing the price of rums in Jamaica by 33 per cent., 12562–12565. This is brought out in Jamaica's Annual Colonial Report, No. 549, Command Paper, No. 3729, 12581, 12582. Witness relied on bouquet and flavour to a large extent in prosecutions, but his results were always confirmed by analysis, 12755, 12757. The patent still has never been used for making true Jamaica rum; witness considers it would ruin their industry, and secured several convictions for selling it as Jamaica rum, 12536–12538, 12546, 12547. Witness has had private outside information for all his prosecutions, 12777.

Manufacture of Jamaica rum: Witness gives a description of the manufacture of Jamaica rum, 12552, 12828–12833. The planters of Jamaica attribute to four causes the superiority of their rum. First, soil and water, 12552, 12804; second, rich molasess, 12552, 12805–12809; third, the manner in which the wash is set up for fermentation and the preparation of the ingredients used, 12552, 12810–12812; fourth, the use of the old pot still and retort, 12552, 12834–12849. Re-distillation takes place with the low wines, 12758, 12759. There is no direct legislation in Jamaica as regards manufacture of rum, but witness believes the Planters' Association would oppose the production of rum not up to the ordinary requirements, 12802, 12803.

Definition of rum: This should be made in a pot still by direct fire. In Jamaica rectifiers are never used, 12520–12527, 12534, 12535, 12539, 12754, 12798, 12799. To be called "Jamaica Rum," it must be manufactured in Jamaica, 12505, 12745. Though rum is made in patent still in the West India Islands, witness would limit the term "Rum" to the pot still product, 12858–12533, 12544, 12545, 12639–12649, 12651–12653.

Patent still products: These should be labelled as such, 12543. There is no illicit patent still spirit manufactured in Jamaica, or brought in from other islands for blending; this is owing to prohibitive duty on all spirits coming in to the island, 12548–12551. Witness believes patent still destroys all the ethers and valuable properties in rum, 12540. Difference between pot and patent still easily recognisable by consumer, 12541, 12542. Patent still spirit, which is cheap in the United Kingdom, is blended here with Jamaica rum, and the product is sold as Jamaica rum, 12518, 12519.

Maturation: This does not often take place in the colonies, though where it is done, rum is more valuable, 12823, 12824. Most of the rum imported here is under two years, 12825, 12826. It is matured in oak casks, 12827.

Imitation rums: Witness believes they are made from essences mixed with silent spirit, 12747.

Witness states that in the past the Government did not always support them, 12566–12580.

O'KELLY, Mr. Edward Peter—

Is Chairman of the Wicklow County Council, 2173, and of the Baltinglass Board of Guardians, 2174, and land agent for Mr. Hume, 2175. Formerly Member of Parliament for Co. Wicklow until 1895, 2171, 2172; resides at St. Kevins, Baltinglass, Co. Wicklow, where he has been a grocer, publican, and wine and spirit merchant since 1879, 2170, 2176–2180.

Pot still whiskey: Witness deals solely in this, 2181, 2183; principally Jameson's and Power's, 2204, 2205; customers aware of its origin, 2206. In Ireland Irish pot still is considered the best whiskey, 2202; consumption is decreasing, 2196. Public taste much improved in last 20 years, 2195. Practically no sale for Scotch whiskey, 2197, 2198. Marked distinction in flavour between Scotch and Irish whiskey, 2199–2201.

Patent still spirit: Witness has no experience of this, 2182, 2188; none is sold in his village, 2191; it has been offered to him, 2188, 2192, at one-third cost of pot still whiskey, 2193, 2194, but it would not be advantageous for him to keep it, 2189, 2190, 2195.

Maturation: Witness never sells whiskey of under four years, 2185; is aware of the age of all whiskey he sells, 2184; has observed that ill-effects of Irish whiskey decrease with age, 2186, 2187.

PETERS, Mr. J. C. L.—

Is Managing Director of John Crabbie and Co., Rectifiers and Wholesale Whiskey Merchants, Leith, 12158, 12233, 12234, and has been in the trade for 30 years, 12159. Witness wishes to give evidence as a rectifier, 12160.

Compulsory bonding: Witness considers that spirits destined for rectification should be exempted from age limit, as no improvement would be made in the spirit by keeping it, 12188–12191, 12219, the rectifiers finding it desirable to get the spirit new, 12216–12218. Witness thinks there would be a difficulty in ear-marking spirit required solely for rectification, 12220.

Export trade: Witness is in favour of Excise regulation allowing addition of sweetening or colouring matter to spirits in bond for export, as at present done, 12161–12187. Previous witnesses wished to have this repealed, 12163, and witness is appearing to combat their view on behalf of himself and leading Scotch rectifiers, 12164, 12168–12173. He considers the repeal of permission would be injurious to their trade; confining the manufacture of goods to duty-paid spirits, and thus allowing them to be cut out by foreign competition, 12176. Witness would be opposed to repealing the regulation allowing the mixing of British and foreign spirits in bond for export, as the trade is considerable in these, 12192–12210. He agrees that whiskey might be excluded from the definition of "British Plain Spirits" in this regulation, in order to protect the whiskey trade, 12204-12210. Whiskies or other spirits mixed or compounded in bond with foreign spirits for export, must be so designated on cask, 12202, 12221–12223, 12226–12228, 12263, 12264; discussion on this, 12265–12269. British spirits mixed with rum, and cask marked "British Rum," 12195–12201, 12224, 12225.

Grain spirit: This is procured in Scotland for rectification, 12111–12113; mainly for expediency and on account of price, 12214, 12215. Witness is unaware whether this is sold to manufacturing chemists with-

out rectification, but his firm always sells them rectified spirits only, 12229–12232. Witness's firm buys the cheapest spirit possible for rectifying, 12236, 12253, 12254, which they consider too poor a quality for blending with their whiskey, 12246. Witness is not interested in the materials used, 12243, and does not know whether it is the product of yeast distilleries or not, 12237, 12238. Witness is not a distiller, 12244; he would buy grain spirit for rectification from any distillery, 12245–12252, specifying, however, that it is for this purpose, as he believes it is probably made in a cheaper way and is not sold in the market as whiskey, 12247, 12251, 12252. The spirit is rectified solely for the purpose of getting out the alcohol, and it is called rectified spirit, 12255–12262. Its strength is 66 over proof, 12257. The whiskey bought for selling purposes is of a better quality, and is bought as a product from malted cereals, 12235, 12240–12242.

Pot still products: Witness's firm never buys them for rectifying purposes, as they are too costly and require a greater amount of labour, 12270, 12271.

PHEYSEY, Mr. William—

Is manager of Wine and Spirit Department of the Army and Navy Stores, and has had forty-five years' experience in wine and spirit trade, 2617–2620. Stores has 80,000 subscribers, and sells Scotch and Irish whiskey, 2621–2624; but more of Scotch than Irish, as trade in the latter is decreasing, 2625–2627.

Definition of Irish whiskey: It should be distilled in a pot still from mixed grains according to the formula of each distiller, 2628–2630.

Witness introduced a blend as an experiment, and it was a failure as regards business (proportions were roughly two-thirds pot still and one-third patent still, which was stated on label), 2638-2678. In sale of proprietary blends the name is the chief factor that ensures sale, 2792–2795. Comparison of price between this blend and pure malt whiskey, 2659–2667.

Proprietary blended whiskies: Large quantity of these sold as Scotch whiskey, 2678–2694; though at Stores proportion of these sold is small compared with total sales of whiskey, 2786, 2787. So witness thinks that most of his customers prefer pure pot still to a blended whiskey, if so described on label (as at Stores), 2708–2731; and the proprietary blends are trading on the reputation of the old pot still whiskey and ignorance of public as to blends, etc., 2896–2898; though public taste does incline to a less highly flavoured article than pure malt whiskey, 2829–2843, 2850*a*–2854. Some blended whiskies are deleterious (though this is probably not due to the grain spirit), 2844–2850; and the ordinary customer at a public-house who asks for a well-known proprietary blend would probably get a better article than the publican's own whiskey, which would also be blended, 2732–2745; though there is danger of some blenders blending even proprietary spirits, so that there is only an infinitesimal proportion of pot still in the blend, 2805–6.

Witness would not deny blends the name of "Scotch Whiskey," to which long usage has given them a certain right, so long as the proportions of blend are stated on label and in a notice displayed in public-houses, 2746–2759, 2809–2829.

Effect of whiskey on health: Witness considers that pure pot still drunk to excess would be more likely to have a bad effect on the stomach, but this would be transitory, 2695–2705; whereas effect of blend, though not so apparent at the time, would probably be more permanent, 2796–2802.

Compulsory bonding: Witness approves of three years' limit if possible, 2760–2767. Pot still matures and improves in bottle, but patent still or grain spirit only acquires flavour from a cask, and does not alter in any way in bottle, 2768–2779, 2855–2859.

Cambus: Plain patent still spirit. Stores have had very small sale for this, 2644–2653; it matures in wood only, 2826–2836.

Witness generally thinks that legislative interference with regard to sale of potable spirits is highly desirable, 2660.

Recalled—

Witness's firm deals largely in brandy, 16029, principally bought wholesale in casks and bottles from Cognac, 16030–16032. He considers Cognac the higher quality of brandy, 16033, 16034, and defines brandy as the product of the distillation of wine distilled in the pot still, 16035, 16050–16052. A large quantity of brandy is produced in the patent still, 16036–16039, and sold here blended, 16040–16042, the blend being of a cheap and inferior quality, 16043, 16046, 16047, easily distinguished from Cognac by consumers accustomed to the better flavour, 16044, 16045, and witness would not sell it as brandy, 16048–16050, without a qualification of some kind, 16088–16090. He describes the different effects of distillation by patent still as compared with pot still, 16051, 16052, and considers the former product unwholesome, even if blended with Cognac, 16055–16057.

Blended brandy is imported here largely, 16058, and he considers a description should be given to the consumer as to its nature, 16059, 16079–16084. He admits the difficulty of preventing fraud with "over the counter" sales, 16066–16073, 16101–16111, and thinks that the merchant and consumer can only be protected by stricter Excise regulations, 16072, 16073, 16091. He suggests that when spirits enter the country special labels should be affixed to bottles of spirit not constituting pure brandy; this should be followed to the cellar of the merchant, who must keep a special spirit stock and permit book of all mixtures, 16071. Mention is made of the French method of controlling mis-description, 16074–16078. Witness would like a department similar to that in the United States for referring questions of definitions and chemical analysis, and a fixed standard should be applied; this machinery to act in conjunction with the Excise, 16092–16100*a*, 16112–16130. This would protect the consumer and the producer of the honest article, 16131–16137.

PLUNKETT, Right Hon. Sir Horace, K.C.V.O., F.R.S.—

Member of Parliament from 1892 to 1900, 2863. Has only a general knowledge of whiskey, 2864; and is not connected with the trade, 2865; but speaks in the interest of agricultural community of Ireland, 2872, 2885; in which he has been actively interested for twenty years, 2862.

Definition of Irish whiskey: Pot still whiskey, 2866; made of materials as far as possible indigenous to Ireland, 2867–2870, 2873–4, *i.e.*, malt and barley, 2875.

Patent still whiskey: Witness does not object to this if described as such, and does not wish to put any restrictions on its production, 2884; but the foisting on the public of whiskey composed of materials, such as maize, is unfair competition with the Irish farmers, and will have serious effects on agriculture, 2867–2874, 2876, 2881-2.

Manufacture of whiskey as defined by witness would tend to increase the growth of Irish barley, 2876; which is all bought in the country, 2878; though more for stout than whiskey, 2879–80. No falling off in crop of late years, as much has been done to stimulate production, 2873; though there is a considerable importation of barley, 2883.

FOWELL, Sir Richard Douglas—

President of the College of Physicians and consulting physician to the Middlesex Hospital and Brompton Hospital for Consumption, has been connected with other institutions, 10983–10986. Has had large experience of diseases, 10987.

Whiskey for medical purpose: Used chiefly as a stimulant and for dietetic purposes, 10993, 10994, brandy still chiefly used in treatment of disease. 10988–10991, 10995. Witness is no judge of whiskey, has made no observations with regard to kind used, as long as good and of fair age, 10996–10998, 11011. Does not think that physicians know the difference between "pot still" and "patent still" but that they know a great deal of it is a blend, 10999–11001, 11016. He would attach some importance to flavour, 11005, 11024, but chiefly to amount of alcohol present, 11005, 11006.

Whiskey as a beverage: The use of this instead of brandy has greatly increased of late years, 10992. Witness thinks from experience that well-flavoured whiskey is more freely drunk and capable of more dilution, 11007, 11008.

Comparative virtues of pot still and patent still whiskies, and their effects, 11021. Pot still whiskey

would have more apparent effect, as proved by experiment of Dr. Rivers, 11021–11024, but is too expensive for general use, 11018.

Maturing of spirits: Advantage of this, 11010. Witness doubts whether when toddy was much drunk new whiskey was used, 11012, 11013, does not know but thinks that probably purer Highland pot still whiskies were used, 11014, 11015.

Witness thinks the consumption of raw spirits often responsible for disease and mental disturbance, 11002, 11003, 11009, but would depend on the quantity taken, 11004.

Materials used in the production of whiskey and its flavour, 11017–11020.

Blending: Witness thinks knowledge of this immaterial, except for trade purposes, 11021.

POWER, Mr. James Talbot—

Is chairman and principal proprietor of Sir John Power and Sons, Ltd., Dublin, and is Deputy-Lieutenant, 1768–1771. Witness has large experience in the distillery, which has belonged to his family for one hundred and seventeen years, 1772–1774.

Whiskey is produced by this firm only by pot still process, 1775; and materials used are malted barley, unmalted barley, and, in small proportions, oats, wheat, and rye, *i.e.*, cereals indigenous to Ireland, 1776–1780, 1797–8; and only spirit prepared in Ireland in this way can be called Irish whiskey, 1777; 1799, 1808-9. Three separate distillations and direct fire-heat necessary to produce distinctive flavour and characteristics of Irish whiskey, 1794–5, 1918; in the days of the illicit still the still was used two or three times, 1919–20. Lyne arm: antiquity of this, 1800–1, 1921–2. Maize has never been used by witness's firm, 1781; as it would not give proper flavour of whiskey, 1782; which also varies in different distilleries, 1892–1896. Distillers rely far more on taste than on chemical analysis, 1897–1900.

Patent still spirit: Witness considers this a neutral spirit, 1783; with none of the characteristics of whiskey, 1784, 1796. Maize is chief material used in patent still, 1791; and uncured malt for conversion 1792. Useless to use high-class materials in patent still, 1793.

Suggested restrictions as to materials and processes used in manufacture of whiskey, 1824–1826; the materials ought to be limited to cereals indigenous to Ireland, 1827–1829.

Relative price of pot and patent still products, 1802–1804; and relative cost of materials in pot and patent stills, 1838–1891. Figures given with mash of 33 per cent. matt, 47 per cent. barley, and 20 per cent. oats showing difference of 1½d. per proof gallon, witness does not accept this, 1886, 1889–90.

Blending in bond of patent and pot still products is increasing largely, 1816; this blend is sold as whiskey, 1817–18, 1935–1941; and witness considers that to do so is a fraud, 1805–6; as when whiskey is asked for, consumer expects to get pot still, 1807. Witness does not desire to stop sale of patent still spirit, but considers that the public ought to be protected by having it sold as such, which is always done in wholesale trade, 1810–1812, 1925–1935; and it is only called whiskey after it has passed through blenders' hands, 1936–1941.

Revenue should protect public which they do not do at present, 1813–1815; since Excise pay no attention to labelling except to forbid "bottled in bond" being put on label, 1819. Witness gives an instance of an Inland Revenue official being reprimanded for giving a certificate when asked for, 1821–2; though other countries require one, 1821–1823.

Compulsory bonding: Witness agrees with three years' limit, 1829; which should apply equally to pot and patent still products, 1829–1836; as it would probably improve even patent still spirit, 1834. Witness's whiskey is largely used when five years' old, when it is very good, though of course the older the better, 1907–1910.

Fractionation in pot still: Witness does not admit this, 1911–1914; nor any similarity between patent and pot still, 1914–1917.

PRATT, Mr. Charles—

Is Principal of Messrs. C. Pratt and Sons, Wine Merchants and Blenders of Whiskey, with a business connection in Lincoln and the neighbouring counties, 11729.

Definition of whiskey: The product of the distillation of cereal grains, either in a pot or a patent still, should be called whiskey, 11760–11765.

Age guarantee: Witness thinks this should be given by the Excise as in Canada. It could easily be done with bottled whiskey, and a charge of 1s. a dozen might be made. Although witness would prefer this to be compulsory he thinks it would be better voluntary than not at all, 11731–11737, 11766–11774. He only asks for an age guarantee, not for one of materials or proportions, 11780–11784. In case of blends the average age should be taken, 11785, 11786. He does not think this guarantee would facilitate or encourage fraud, which would be too serious an offence, 11787–11792. It would also help the ordinary blender to compete with the proprietary brands, 11777–11779. Reference to the United States procedure in this connection, 11775, 11776.

Blends: In witness's opinion a blend of old patent still flavoured with old pot still is much more wholesome than new pot still when a cheaper whiskey is required, 11738–11740. The English taste in whiskey has a decided objection to heavy "smoky" whiskies such as are many of the pure malts, 11741–11743. Patent still product of nine or ten years of age ought to be used, and witness would prefer this to a pure malt at three or four years old, 11744–11747.

Patent still spirit: The products of different distilleries have separate and distinct flavours, while Irish and Scotch patent still products also are slightly different from one another, 11755–11758.

Proprietary whiskies: Witness states that many proprietary whiskies average six and a half bottles to the gallon instead of six, as is correct, 11748–11754.

PRESTON, Mr. F. W. Percy—

Is a Director of Preston's Liverpool Distillery Co., Ltd., Distillers of British Plain Spirit, chiefly made from molasses, and exporters, 14490–14494.

Witness's firm mixes Demerara rum with molasses spirit for exportation to Africa, the Mediterranean and New Zealand. The proportions of the compound vary according to flavour required and price paid in these different places, 14497–14509, 14534–14539, 14541–14564. "African Rum," "Mediterranean Rum," "R. W. P. Rum," etc., are trade terms, and dealers understand that they are compounds when invoiced under these names. Witness does not consider that the native customer is prejudiced, although he does not know composition, 14513–14519, 14551–14564. For Australia and New Zealand, the R. W. P. rum has also a certificate on invoice, stating that its origin is "England and Demerara," 14520–14533, at present witness has no two years' old spirit, so he cannot export to Australia, 14497–14500, 14586–14588. He would object to giving proportions on invoice, 14565–14568.

Witness states that if the mixing in bond were prohibited, the trade would go to Germany, who now compete with them though their prices are higher, 14498, 14503, 14507, 14569–14582. In witness's opinion, a mixture of real rum and molasses spirit is superior to one of real rum and grain spirit, 14510–14512.

QUIN, Mr. James—

Is managing director of John Quin & Co., Limerick, who have been established seventy years, for thirty of which witness has been in the business, 2537–2542. There is one distillery in the district, but witness knows nothing of its products, which he believes go to Liverpool, 2594–2598.

Pot still whiskey: Witness thinks this is much more healthy than patent still, 2555, 2672, 2599. He attributes the difference to the products, the empyreumatic constituents, which are taken up in pot still,

but not in patent still distillation, 2560–2565, and he does not think that pure alcohol would be a wholesome drink, 2565–2569. Nineteen-twentieths of the customers in his district drink pure pot still whiskey, 2542–2544, 2580, 2581. Average price is 4d. a glass, at which price a retailer can afford to sell a good pot still whiskey, and obtain a fair profit, 2586–2590, though to sell it cheaper he must dilute with patent still spirit, 2584–2586.

Blends: Witness thinks that for sale as a cheap whiskey a blend might be more palatable than immature pot still whiskey, but is inclined to think it would not be wholesome, 2572, 2600, 2601, and would prefer it should not be sold as whiskey, 2614, though he mixes cheap Scotch pot still whiskey with patent still spirit and sells it as whiskey to meet demand in poorer outlying districts, 2545, 2546, 2580, 2606–2616.

Maturation: Witness thinks that patent still spirit improves very little with age, 2569, 2593. He approves of at least three years' compulsory bonding of pot still whiskey, 2570, 2571, 2591, 2592.

Potheen or illicit still: Witness does not think any of this product is made in his district, and knows nothing about its characteristics, 2573–2578, 2603, 2604.

RICHARDSON, Mr. Aaron—

Is an Inspector under the Board of Customs, 317; has had thirty-nine years' service, 318; is called to give explanatory evidence with regard to foreign spirits, 319. Bonding operations, etc., are same as explained by Mr. Tedder, 319, 353–355.

List of imported spirits, 321.

Brandy: Duty on, and its origin, 325–6; no legal definition of, 327–329; marking of, 360–1.

Rum: Duty on, and its origin, 330–1; imitation rum, 332–334, 362.

Geneva: Origin of, etc., 335–339.

Unenumerated spirits, 321, 324; sweetened and unsweetened, 340–1; duty on, 340, 342.

Perfumed spirits, which are non-potable, 343–4.

Report and entry of imported spirits, 346–7; description of spirits, 356–359. Gauging of quantity, 348–9. Calculation of strength as described by Mr. Tedder, 350–352.

Exportation of spirits from bonded warehouses, 363–365; description of these and returns of exports, 365–369.

Whiskey: Classified in lists of exports as British plain spirits, 370.

Analysis: Purposes of these, 327, 371.

ROSS, Mr. William H.—

Has been for 18 years Managing Director of the Distillers' Company, Edinburgh, and was previously the General Manager and Secretary; the Company was formed in 1877 by the fusion of six of the largest patent grain distilleries in Scotland, and now consists of 12 distilleries in Scotland, two in England (one of gin), and one in Ireland, 4984–4989; they own six patent, six pot and patent, and two pot still distilleries, 4990. The Scotch patent stills are in the Lowlands and the pot still in the Highlands, 4991, 4992.

Historical development of whiskey: Witness hands the Commission a pamphlet issued by the Company in 1905, giving history of the development of the whiskey industry, 5021. He concludes that the patent still spirit has justified its use and claim to be called Scotch whiskey, 5022, 5023. Witness traces the use of Irish whiskey to the year 1600 in the form of Usquebaugh, an article produced from barley and flavoured with raisins, fennel seeds, etc., 5029, 5030, and Morewood's History of Inebriating Liquors, 1838, in Scotland in 1590, when an all-malt mash was used, this being considered superior to a mixture of grain and malt; the pot still would thus appear to have developed scientifically as well as the patent, 5030, 5031. In Scotland (Encyclopædia Britannica, 1815) English barley and Scotch bigg malt were used then, to the extent of four parts of the former, this proportion being due to the heavy duty on malt, 5032–5036; he believes maize was employed about 1859, after the introduction of the patent still, its distinctive flavour precluding its use in the pot still, 5037–5041. Patent stills were commenced chiefly in the neighbourhood of big towns, thus displacing the pot stills, 5046–5048. The dissemination of whiskey is due to the extension of railways, but Irish types being less varied, these formerly obtained the general preference, 5044, 5045. Present consumption of whiskey according to Inland Revenue report is—England, 22,000,000 gallons; Scotland, 6,800,000 gallons; Ireland, 3,600,000, 5027, 5028; its exportation to England probably arose on the introduction of the blending system, 5024–5026, about 1860, when the Excise permitted blending in bond and the duty was raised for Scotland and Ireland to 10s. per gallon, 5042, 5043, blending was upheld in the House of Commons in 1874–1876 by the rejection of Mr. W. H. O'Sullivan's plea of the fraudulency of this practice, 5050. Witness quotes extracts from the "Daily Express," of 6th August, 1907, and "Westminster Gazette," of 23rd March, 1908, 5051–5055. The Excise regards all classes as British plain spirits, 5049. Witness objects to incorrect nomenclature, but does not advocate compulsory labelling as a remedy, 5119; this should be conclusive if adopted, though not to the extent of exhibiting proportions of blends, 5184–5187. He is also opposed to standardisation, on plea of inadequacy of chemical analysis to expose original components, 5260–5267. He would extend the term "Whiskey" to potable spirits of any country, distilled from cereal grain, but to merit specific name these should be distilled in the United Kingdom, 5120–5129. He considers patent still spirit too intimately connected with the term "Whiskey" to be now dissociated therefrom, 5254.

Materials for patent stills: The company use barley, maize, rye, oats; barley represents about 30 per cent. of the total, and is chiefly malted, part also of rye is malted; unsound materials are never used, molasses only used at Liverpool for industrial spirits, 4993, 4994, 4996. Foreign barley only is used in patent stills and must be of high class, 4995, 4999–5003. Average of grain used is 46 per cent. maize, 32 per cent. malted grain, 21 per cent. rye, and 1 per cent. oats, but proportions vary in different distilleries, 4997; average cost of malt is 2s. 6d. per cwt. over grain, 4998, 5146, 5149, 5150, the evaporation from grain in kiln-drying is about 7 per cent., 5147, 5148.

Restriction of term whiskey: In Scotland "spirits" and "whiskey" are interchangeable terms, 5088–5091, 5094, 5095, 5097; malt whiskey was formerly called "aqua vitæ" and "peat malt," and grain whiskey "aqua," "whiskey," or "spirits," 5098–5101; to the public it is always "whiskey," 5102–5104. The classes of Scotch whiskey vary greatly, but no other spirit is widely drunk, 5092, 5093, 5117, 5118.

Pot still whiskey: This is stronger than patent still in flavour, but not in alcohol, although being heavier, it might have more rapid effect on constitution, 5244–5248, 5250, 5251. Scotch pot stills are greater in number, but less in size than Irish, 5007–5009. The quantity of maize used in pot stills is immaterial, 5237–5239. Number of distilleries increased in the North of Scotland during last fifteen years, owing to boom, but production is now stationary, 5060–5062.

Patent still whiskey: Production of this in Scotland is about equal to that of the pot still, 5004, 5005, 5096, in Ireland it is about double the pot, and in England it consists solely of patent still, 5006, 5010–5015, 5208–5211. The consumption of patent still whiskey has increased since 1890 from about one-half to two-thirds of the total, 5016–5018, 5019, 5020, 5203–5207, 5249; in the unblended form it is consumed chiefly in the vicinity of the distilleries, though it received a large external impetus through the Islington case, 5083–5087, 5108–5112. The tendency of the trade is not to lower strength, but there is an increase in cheap whiskey of low strength, 5268–5272, this class is not fully matured, 5273–5277. Witness considers the spirit supplied to Davidge prior to the Islington case was of an exceptionally low price, 5218–5221; cheapness is secured by use of maize, but this is not injurious, and its chemical divergence from barley is slight, 5237, 5240–5243, 5273–5275. The Glen Mavis Distillery, Bathgate, produces an all-malt whiskey in patent still, 5209. The product of the Company's Liverpool Distillery is largely used for blending in England, 5212–5215.

Comparison between pot and patent still: Witness exhibits differences and shows how the one class of whiskey sells higher than the other, viz.:—(1) Strength differs between Scotch and Irish, also in Scotland between pot and patent still; (2) In Scotland both classes are sold on original contents of cask; in Ireland pot still distillers charge only on delivered gallon; (3) Pot still distillers charge no bond rent, grain distillers charge about 1d. per gallon a year; (4) Other points are in materials of mash, method of distillation, location of distillery and means of transit for material, capacity and yearly working of distillery, and goodwill in the name, 5056, 5057, 5156; by application these corrections show high-priced Scotch grain spirit to approximate to the lower-priced pot still in price, 5157, 5158, 5162–5165. The whole excess of cost of pot over patent whiskey as regards materials and process is about 6d. per proof gallon; in Ireland less owing to large proportion of unmalted grain, 5058, 5059, 5063, 5064, 5151–5155. Profits on pot still whiskey are considerably greater, necessitated by irregular employment (owing to short demand), small comparative turnover, etc., 5059, 5065–5075. A similarity of materials does not necessarily extend to the flavour in either Scotch or Irish patent stills; differences can be traced by an expert, 5188–5191. Production of yeast is insured by use of rye and effects reduction in cost of patent still; it is not produced in pot still, 5166–5170, 5172–5175, 5180–5183, 5192–5199. Its production does not necessarily involve a low-class whiskey, 5231. The total production in the United Kingdom is about 25,000 tons, and imports from the Continent are about 200 tons weekly, 5176–5179. Witness considers that only the wholesale trade is competent to discriminate between classes of whiskey, but guided chiefly by taste, the public would be opposed to discontinuation of present blends, 5222–5227, 5256–5259.

Blending: This practice has increased the sale of Scotch malt whiskey, 5082; the percentage of blended whiskey is about 80 per cent. of the total consumed, 5085, 5255. Blending has removed much of the discrepancy in selling prices between pot and patent still whiskey, 5076–5081. The company does not supply whiskey for blending with brandy, 5216, 5217.

Maturation: The demand for improved patent still whiskey is increasing; 67 per cent. of the company's is now bonded for over two years, though decline of boom has partially caused this, 5130–5143, 5252, 5253. Scotch and Irish patent still whiskey improves up to about seven years, 5200–5202, 5228, 5232, on the same lines as pot still, 5107, 5229; low class pot still whiskies do not appreciate with age to the extent of the high class, or of Scotch grain whiskey, 5159–5161. Patent still whiskey acquires flavour according to cask used; old casks preferable to new, 5113–5116, 5230. Retail prices have not increased in proportion to age of whiskey, 5144, 5145. Patent still whiskey sometimes attains twenty years of age, in order to blend with company's old malt for export, and for liqueur whiskies, 5105, 5106, 5233–5236.

Recalled.

Manufacture of gin: Witness's firm makes gin from their ordinary cereal patent still spirit, which they rectify and then flavour by the addition of juniper berries, coriander seed, etc., 14149–14156, 14199, 14200. Witness is of opinion that a certain amount of flavour in the gin is due to its being made from cereal spirit; this would not be the case with molasses spirit or pure alcohol, 14173–14181, 14195–14199. He supplies a spirit from a yeast-making distillery for making gin, although he does not use it himself; it is cheaper than Caledonian grain whiskey, 14182–14189. In London the spirit is actually distilled with the flavouring materials in a form of pot still, and this method gives a different flavour to the gin from that obtained by witness's method, 14215–14218. All gins vary in flavour according to the spirit and other materials used, 14162. Pot still product was used about fifty years ago to make gin, but came into disuse on the advent of the cheaper patent still spirit, 14152, 14153, 14157–14160, 14191–14193. Witness is aware that essences for making gin are sold; would object to there being any restrictions imposed on processes or materials used in manufacture of gin, 14161, 14201–14206, 14219, 14220.

Compulsory bonding: Witness objects to this as gin deteriorates with age, 14170–14172. He thinks that a two years' limit for whiskey would give an unfair advantage to gin, and suggests that the Excise should give a certificate of the exact age of whiskey, if demanded by the trader, 14208–14214, 14221–14223, 14227–14231.

SCHIDROWITZ, Dr. Philip—

Is a Doctor of Philosophy (Berne), Fellow of the the Society of Public Analysts, member of Committee of Society of Chemical Industry, and a member of the Council of the Institute of Brewing, 3921–3923. Witness is a consulting and analytical chemist, 3920, with great experience of chemistry and technology of alcohol industries, especially whiskey, 3930–3933, and has written papers and is often consulted on these subjects, 3927–3933. Witness has given evidence before Departmental Commitees, 3925, and was retained by defence in Islington case, 3925, 3926, 4199, he now appears as an independent witness, 4200, 4201.

Definition of whiskey: Witness thinks a fair definition would be: "Scotch whiskey is a spirit distilled in Scotland, the volatile constituents of which are derived entirely from cereal grains (which include rice, and need not be indigenous to Scotland, 4204–4209), and malt, it must contain no added matter except water, sweetening and colouring, and must have odour and taste associated with this designation," 3934–3940, 3964–3969, 3976, 3977, 4202–4204, 4210, 4392–4414. Witness thinks that any chemical standard is impossible owing to wide variation in whiskies and to the fact that figures have no relation to flavours, it would only detect extreme cases, 4257–4270, 4307–4312. Dr. Teed's figure for this (380 parts of impurities per 100,000 parts of whiskey) is too high at any rate, reasons, etc., 4272. A patent still distiller could, with chemical knowledge replace impurities if standard were fixed, 4264–4267, 4316, 4317. Witness would advise prosecution under Merchandise Marks Act if a man sold as "pure malt whiskey" whiskey which is not pure malt and other fraudulent descriptions of this sort, 4143–4146, 4312–4315.

Classification of whiskey: In next edition of Encyclopædia Britannica witness divides Scotch whiskey into two groups (*a*) Pot still or malt whiskies. (*b*) Patent still or grain whiskies, 4124. (*a*) can be subdivided as follows:—

1. Islays (with high peat flavour).
2. Highland malts (include Speyside and North Country whiskies and are less highly peated than "1").
3. Lowland malts (smaller in flavour and not quite so fine).
4. Campbeltowns (not so fine as similar whiskies made elsewhere).

(*b*) Grain whiskies are certainly potable and have distinctive characteristics, 4214. Large modification in witness's views since last article in Encyclopædia Britannica, 4121, 4122, 4125, 4126, 4193, 4197, 4198. Analyses and tables with reference to this subject, recalculation of Dr. Bell's figures, 4218–4226.

Pot still: Improvement in whiskey by altering height of neck, 4077–4079, 4212, 4213. Use of rectifying boxes, 4079, 4080, 4085, which have same effect as Lyne arm in Irish stills which are much larger than Scotch, 4079, 4080. Purifiers and their use, 4086–4088. The Lyne arm is a very efficient form of rectification or dephlegmation, 4081–4084. Limitation in truth of statement that pot still product will stand greater dilution than patent, 4469–4474. Pot still product can be bought if asked for by name, 4142, 4143, 4379, 4380, but is mostly sold for blending, 4303–4306. Some Scotch pot stills heated by steam, 4089–4093.

Patent still: Coffey still is much more economical than pot still because (1) the process is continuous; (2) there is a great economy in heating by using vapours to heat wash; (3) it is on a much larger scale, 4094. Witness thinks patent still can be made to produce an article with all characteristics of Scotch whiskey, 4129–4131, 4134, 4275, 4278. Witness was at one time under the still common misapprehension that "patent still," "grain," "silent," and "plain" spirits were synonymous, 4126, 4254. Grain whiskies are largely sold and described as such, 4227–4229. Witness imagines that Mr. Pheysey's statement that "patent still spirit did not mature in glass" referred

to highly rectified German spirit, 4126, 4127. Difference in flavour between patent still spirits does not alter with age, 4298a-4300. Witness knows of a patent or continuous still which produces, from a pure malt mash, a whiskey exactly same in chemical composition and flavour as Highland pot still product, 4030–4041, 4045–4049, 4128, 4132, 4135–4138. Analyses to prove this both by Allen-Marquardt and colorimetric methods, 4041–4045. Old patent still whiskey used in very best blends to prevent "blueing," etc., 4513–4525.

Fractionation: Witness is absolutely certain that elimination of bye-products takes place in pot still, the difference between this in pot and patent still being merely a question of degree, 4055, 4076, 4111–4115, 4178–4181, 4193–4196. Dr. Bell's evidence on this, 4116–4118, 4183. Hydrolysis of esters, 4066–4070a, 4074, 4075, 4116–4118. Analyses to prove witness's assertion, 4056–4067. Distiller would not run foreshots and feints and whiskey at higher than bonding proof strength if all were retained, 4071, 4072, 4075, if this was so, at end of few years 100 per cent. of impurities would be distilled in foreshots and feints, 4073, 4074. Fractionation is partly oxidation of aldehydes, 4074, 4075, 4189. Distinction between different bye-products, 4154–4177. Witness's figures do not go back to wash stage, which, however, he has often tested, 4095–4099, but many more experiments would be needed to detect actual changes in feints of pot still, 4190–4192.

Comparison between pot and patent still: Witness does not think there are any technical or scientific differences between action of the two, the patent still doing quickly in one process what is done in three distillations in pot still, 4027, 4028, 4184–4188. Public knows no difference between these products and a blend of both, the greatest demand being for the latter, 4379–4386. Analogy between present cases and adulterated jam and honey. Witness does not think these are parallel cases. Each case under Food and Drugs Act must be decided on its own merits, 4147–4153.

Flavour: Amount of malt in mash is dominated entirely by flavour required, 3940, 3941, 3970–3975. Witness could generally distinguish 30 per cent. patent still added to Highland malt whiskey, 4357–4362, though this would not be possible for average man who knows very little about the present question, 4362, 4363, 4375–4378. Differentiation between malt pot still and malt patent still products is by quantity, not quality of flavour, 4355, 4356. Raw grain mash gives different flavour from a pure malt one, 4365–4367. Effect of water used in manufacture on flavour, 4341–4344. Overlapping of co-efficient of impurities in pot and patent still does not prevent flavour being distinct, 4276–4284.

Whiskey and Public Health: Witness thinks food value depends on alcohol, 4139–4142. Though in some cases bye-products may be important, analogy between presence of these in whiskey and in wine for medical purposes, 4475–4481. Patent still whiskey is in no way deleterious, 4435–4438, though witness cannot express opinion as to whether this or pot still is best for medical purposes, 4391, 4392. Samples of cheap whiskey, method of collection and examination, witness has never found one which could be really deleterious, 4439–4444, 4453–4463, 4482–4487, 4506, 4507, 4512, though this is sometimes the case in cheap brandy and gin, 4508–4510. Witness does not think flavour of American whiskey has any influence on health, 4000–4004.

American whiskey: Whiskey is defined in Pharmacopœia of United States of America as "An alcoholic liquor obtained by the distillation of the mash of fermented grain, such as Indian corn, rye, wheat and barley, or their mixtures, 3953." It is made from maize (with addition of 20 per cent. or 30 per cent. barley, 3956–3962), in a pot still, 3941, 3944–3949, heated by steam, 3982–3984. Product is known as "Straight" whiskey, 3982, and its peculiar flavour is largely due to maturation taking place in a charred cask, 3941, 3942, 3981, 3982, 4004–4012, 4235–4239, which has been tried over here unsuccessfully, 4464–4468. Patent stills used in America are unlike Coffey still and produce very highly rectified spirit, 3985–3988.

Analysis: If analyst was accustomed to characteristics of a particular blend he would more easily detect adulteration, 4327, 4328, 4332, this applies also to self whiskies, but is not important commercially in this latter respect owing to number of different products in each blend, 4329–4332. Allen-Marquardt process, witness thinks this is only reliable method and does not agree with Dr. Teed's remarks. It is the official process in America and Australia, 4415–4420. Its certainty, however, for higher alcohols if propyl is present is rather doubtful, 4228, 4229. Colorimetric Method is very unreliable, 4421, reasons, 4430–4434. Conversion of figures obtained by this process into those obtained by Allen-Marquardt is practically impossible, 4285–4298. Roese Method is official French process and is more unsatisfactory than colorimetric, 4421–4427. Alkaloids and nitrogenous bodies, analyses for these. Alkaloids have never been found by witness, 4445–4452, 4488–4493, 4503–4505, nitrogen, decrease or increase with age, 4494, pyrrol, 4495–4497. Presence of these bodies probably due to peat used for drying malt, 4498–4501. Method of determining residual alcohols in spent lees and wash, 4099a–4111. Overlapping of total co-efficients for brandy and whiskey analyses, 4334–4338, when this takes place in pot and patent still analyses it is due to higher alcohols, 4318–4325.

Maturation: Use of sherry cask is unnecessary, 4551–4554. Artificial maturation, Hewett's dealdehydizing method, 4543–4550. Less furfural in old whiskey, 4550. Witness has no doubt that maturation improves whiskey and approves of an age limit of two years compulsory bonding for both pot and patent still products, it would ensure a better article and trade would not object, 4527–4542, 4555, 4558, 4560. Witness is aware that Committee of 1890-91 considered this unnecessary, 4556–4566.

"Silent" spirit: This is a comparative term, but should strictly apply only to absolute alcohol, 4226, 4227, instances a very fine Lowland whiskey which is called "Silent malt whiskey" and another "plain malt spirits." Terms are very loosely used, 4241–4253. In Scotland whiskey is asked for as "whiskey" or "Spirits," never "Scotch whiskey," 4364.

Molasses spirit: Witness would sharply differentiate between this and grain whiskey, 4022–4026, 4214.

Foreign spirits: Those made from potatoes, 4346, are practically "silent," while the products of molasses and beet contain appreciable amount of ethers, 4225. With reference to Dr. Bell's evidence before Select Committee, witness does not think these are now much imported, 4345. No "vodka" (made in Russia from rye and maize) is imported for adulteration, 4347–4354.

Brandy: Witness's definition of this is same as that for whiskey, except that it must be made in France from grapes, 4202; opposition to word "France" in this, 4210, 4211. Witness objects to ether standard, 4339, 4340, which has led to much adulteration with artificial essences, etc., 4124, 4264–4267.

Recalled—

Definition of brandy: The English word "brandy" is quite as old as its Continental equivalents, 15864. Brandy generally is a spirit obtained by the distillation of fermented wine made from fresh grapes, 4202, 4210, 4211, 15865–15871, 15895–15900, 16003–16011, though in the past grain spirit was so called, 16004–16008, 16014, 16015. He quotes definitions given in the third and fourth editions of the British Pharmacopœia and the United States Pharmacopœia (8th Revision), 15872, 15873. Blends of grape and grain spirit should not be called brandy, 15875, 15876, 15992–15994. Witness approves of the new French administrative measures, 15997, 15998. The term Cognac is used in Germany to signify a better class wine spirit, 16023–16026. British brandy is a cereal spirit prepared with flavouring essences, and has been known to the trade by this name for several years, 16007, 16009, 16016–16022.

Production of brandy: Brandy is produced chiefly in France, also in Spain, Australia, California, Italy and South Africa, 15877, 15878, 15882–15888; though witness's knowledge is confined to the French, 15879–15881. The Cognac costs three times as much as these other brandies, 15892–15894, 15996, and the best come from that district, 15889, others from Armagnac and the Midi, 15890. The production has increased in the Midi since the phylloxera invasion, Midi wines, often unsaleable, are distilled into brandies, 15891. The selection of stills is a matter of quality

quite as much as economy, 15906; the Cognac people obtaining best results from the simplest pot still, whereas a more complicated still is necessary to expel the "terroir" flavour, 15904–15907. Highly rectified wine spirits flavoured with essences are not largely imported into this country, 15901–15903. Blending of brandies is purely a commercial question, 15925, 15926. He considers they improve with age, the furfural decreasing and the esters and higher alcohols increasing, 15918–15924.

Analysis of brandy: Monsieur Rocques finds it impracticable to fix either a maximum or minimum limit for secondary products in eau-de-vie de vin, 15928–15932, 15999. Witness himself has made several colorimetric analyses of samples (giving figures), 15935–15939, using isobutyl alcohol for control, 15940. Furfural, probably originating in pentose matter, 15941, may only be formed in minute quantities if one distils in vacuo, 15942–15946. The esters compared with the higher alcohols are rather higher in wine than in grain spirit, 15947, 15948. Commenting on Ordonneau's analyses of the secondary products of Cognac brandies, 15950, he emphasises the absence of isobutyl alcohol, 15951, and the presence of œnanthic ether (believed to be present only in grape spirit), 15952. Witness objects to the ether standard as suggested by Mr. Fordham, in the brandy test case, 15954–15961, which has led to much adulteration with artificial essences, etc., 15962, and instances analyses of Cognac brandies by Bell, Girard and Cuniasse, Fernbach and himself, which come below that standard, 15962–15965. Witness places value on analysis, 15965, 15966, 15968, but thinks the value of tasting exaggerated, 15966, though this in conjunction with analysis is helpful, 15965, 15966. He agrees with Fernbach that commerce should recognise the value of science, 15936, 16001, 16002. He emphasises the necessity for uniformity in analytical processes, 15969–15971, 15995, and suggests the formation of a Central Board (as in other countries) to standardise methods of analysis, etc., 15972–15975, 15982–15991. Regarding the medicinal properties of brandy, he suggests experimentation to justify the insertion of brandy in the Pharmacopœia, 15976–15981.

Colouring: Witness objects to America's threatened exclusion of coloured brandies, or to the marking as "Imitation" where this is used, irrespective of quality, 15909–15915; he considers colour is essential to brandy for commercial reasons, the addition being merely a secondary matter, 15909, 15916, 15917.

SCOTT, Mr. James—

Is chairman of the Clydesdale Distillery Company, Limited, 7269; was also with their predecessors, James M. Mackenzie and Company, and has had forty years' experience of malt whiskey distilleries, 7271, 7272. Witness's firm manufactures only pot still malt whiskey, 7270, 7308, 7316; some is sold as self whiskey, which witness himself always drinks, 7309, 7310, 7318.

Scotch whiskey: Whiskey made in Scotland, 7284, from malt only, 7273, 7274, in either pot or patent still, 7285, or blends of both, 7285, 7286.

Scotch grain whiskey: Whiskey made from a mash of any cereals, 7273, 7274, 7278, and containing 30 per cent. of malted barley, 7273, 7276 (agreed upon by the East, West and South of Scotland Association, 7277). Witness has no knowledge of the effect of rice, 7275.

Blends: Those containing malt may be called "Whiskey," 7279, 7287, 7312, 7313, but should be labelled, for the protection of the public and the blender, as "A Blend of Malt and Grain Whiskey," when containing a larger proportion of malt whiskey; or, "A Blend of Grain and Malt Whiskey," when the larger proportion is grain whiskey, 7280–7282. Though witness is not in favour of blends containing only a small percentage of malt, 7313, restriction is hardly possible, 7314, 7315, as public taste differs and blending is on the increase, 7319. Malt whiskey is not improved by addition of grain whiskey, 7311, 7317, 7318.

Compulsory bonding: Not objected to if applied to all spirits, British and foreign, 7288–7290, though not advised, as this would seriously interfere with trade, 7288, 7292, as some spirits, such as gin, do not improve with age, 7291.

Export trade: Witness agrees with Mr. Seaman, 7307, that same limitation as to colouring matter, etc., be imposed on spirits for exportation as now imposed on home spirits, 7293–7303; this might remove present objection of United States Customs to any colouring additions, 7293, 7304–7307. The matter was brought up in 1907, before Central Association of Malt Distillers of Scotland, 7293, 7305, and suggestion now made is approved of by West of Scotland Association, 7307.

SEAMAN, Mr. W. J.—

Is managing director of Messrs. W. P. Lowrie & Co., malt distillers, bonded warehouse proprietors, blenders, &c., 6743, 6744, 6746, 6838, 6839, which company is allied with five other malt distilleries, 6747; also director of Messrs. James Buchanan & Co., Limited, 6745, 6848.

Definition of whiskey: Spirit made in Scotland from cereals, the mash containing not less than 30 per cent. malt, 6750–6753, 6765–6770, 6772, 6832, 6834, 6855, 6872, 6923, spirit made from molasses or rice should not be sold as whiskey, 6759, 6760, 6771, 6773–6777, 6795–6802, 6883, 6889–6927, 6935–6941. Witness would call product with lesser percentage of malt, and made from molasses or rice, "Plain British Spirit," or "Alcohol," 6755, 6886–6888, 6893, 6894, 6925, 6926. Witness does not believe molasses spirit is used at present in Scotland, 6758, 6814. Scotch grain whiskey generally contains 30 per cent. minimum of malt, 6778, 6779, and is quite satisfactory as at present manufactured, 6831. Witness not opposed to maize, which makes quite a satisfactory grain whiskey, 6827, 6828. He does not know its flavour in a pot still, 6829, but does not agree that it makes an unpleasant spirit, 6830. Witness believes in distinguishing between "Malt" and "Grain" spirit (not pot and patent still) in Scotland, and between pot and patent still in Ireland, 6816. English spirit made from cereals may be called "Whiskey," but not "Scotch Whiskey," for geographical reasons, 6820. Witness does not know what proportion of malt Irish pot still distillers use, 6942.

Blending: Preference for blended whiskey, 6763, 6764. Advisability of use of old whiskey for blends, 6803; unsuccessful experiments with artificially aged whiskey, 6804–6807. Witness's firm blended 2,604,000 gallons from October to March of this year, containing average 60 per cent. pure malt and average age being seven years, 6748, 6749, 6841, 6842, which they bottle, 6843. Witness states that public generally could differentiate between Scotch and Irish blends, 6819. Impossible to prevent mixtures of English and Irish with Scotch spirits, but this could be made punishable if detected, 6821. Higher priced blends, provided they are old enough, contain larger proportion of malt, 6840. Witness has no experience in blending of Irish pot still whiskies, 6835.

Revenue control: Witness considers whiskey should be recognised by the Revenue departments as a distinct product, as with brandy and rum, 6754, 6864, 6865, to include control by Excise over misdescription and proportions, 6780–6782, 6808–6811, 6856–6858, 6866, 6867, 6869, 6873, deviation from this being punishable by law, 6859, 6860 (possible difficulty regarding this control, 6783–6791, 6812, 6813, 6881–6883), which would be a protection to the public, 6880, 6884, 6885, and an advantage in connection with foreign trade, 6868–6871, 6877, there being an increasing demand for attestation and certification in foreign countries for articles of food and drink, 6874–6876. Component parts of whiskey might also be required, 6878.

Standardisation of mash: Witness in favour of this, 6754, 6757. Distillery Company would agree to accept it, also West, South and East of Scotland Malt Distillers' Association agreed to this at their meeting, and a large number of others in the trade, 6756, 6929–6934. On acceptance of legal standard for whiskey, witness considers distinction between patent still spirits unnecessary, 6825, 6826.

Labelling: Witness is opposed to labelling of proportions, 6822. Considers the word "Highland" an important asset in labelling whiskey, 6847. An instance occurred where this word was removed from Buchanan's "Black and White" capsule, which did not denote any change in the whiskey, 6849–6851. The wholesale houses are given proportions of whiskies

supplied to them by witness's firm, 6852–6854, and labelling is done according to their wishes, 6844, 6845, a protest being made in extreme cases of mislabelling, 6846.

Compulsory bonding: Witness in favour of this, 6792–6794, 6861–6863.

Excise regulations: Witness objects to the regulations permitting pure whiskey to be mixed in bond with any ingredient for exportation, 6761, 6762, 6817, 6818, 6836, 6837.

SHAW, Mr. Thomas James—

Is managing partner of Joseph Shaw and Sons, Mullingar, wholesale and retail wine and spirit merchants, 2457–2459, who have no connection with any distillery, 2460.

Definition of Irish whiskey: "A spirit distilled in a pot still in Ireland from malted and unmalted barley and other cereals capable of being grown in Ireland," 2461, 2462.

Blends: Witness thinks these are sold by doubtful firms without consumer being aware of their composition, 2465, 2469. Patent still spirit is used to mask raw pot still whiskey and the product is deleterious, 2465–2473. Witness does not think blends should be called Irish whiskey, 2492. They are largely bought by small houses of uncertain financial position, who get credit and pay large profits to blenders, 2518–2520. Analogy between present case and adulterated butter, 2465–2467, 2493.

Patent still spirit: Witness would not allow this to be called Irish whiskey, 2463, and does not think it should be called "Whiskey," 2464, though he has never known it sold pure in Ireland, 2465, 2474–2477, 2490, 2491, 2502.

Prices of whiskey in witness's district vary between 4d. and 5d. a glass, 2482–2487, 2521–2526, 2532, 2538, though sometimes 6d. is paid if particular brand is asked for by name, 2481, 2482, 2488, 2489, 2532. Consumer never gets benefit of difference in price if a cheap blend is sold, 2521–2536.

Public health: Witness thinks that much deleterious whiskey is sold, 2497, and that a man would get drunk on a cheap blend—which is more deleterious than mature whiskey—more quickly than on latter, 2498–2503, owing to fieriness of raw pot still product used, 2504–2508, which is always injurious, 2509–2516.

Maturation: Witness approves of three years' compulsory bonding for pot still, 2494, 2495, but does not know if patent improves with age, 2496.

SOUTHARD, Mr. Arthur—

Is a London wine and spirit broker, trading in all kinds of potable liquids, 17477–17479.

Egyptian brandies and their process of manufacture: They are made from grapes grown in Roumelia, Greece, Cyprus, and Asia Minor, 17480.

Egyptian brandy is very stout and full bodied, and is well adapted for public house trade, 17484.

Egyptian brandy is entirely a grape product distilled from the pot still only, 17521–17523, 17552.

Price of Egyptian brandies: These are the cheapest brandies witness knows of and very genuine and pure, 17489–17490. He cannot say if this benefit in price reaches the consumer, 17491–17551.

Price of Algerian brandies: These are one-half the price of the Cognac, 17504.

Price of Armagnac brandies: These are not much cheaper than the Cognac, 17507.

Origin of Egyptian brandies: It is true that these partly come from Marseilles, but they originate from Egypt and Greece, 17494–17529.

Definition of brandy: The result of the distillation of wine. Many of the leading brandies do not have that quantity of ethers that are expected to be found in brandy, and yet they may be quite pure, 17514.

The term "brandy" should be applied to any spirit to be traced to the produce of the grape, 17517–17518.

Witness is of opinion that the term "Cognac" should be altogether restricted to the produce of the Cognac district, 17513.

Admixture of grain spirit: He would not consider any admixture of grain spirit to be entitled to the term "Cognac," 17515.

Designation of British brandy: Witness thinks that the correct term is "British," 17516.

Quality of Algerian brandies: They very nearly approach the quality of the very best Cognac, 17503.

Californian brandy: Is magnificent; their wine consumption, however, has recently so much increased that they have ceased to make and export brandy here, 17519–17520.

STOCKMAN, Dr. Ralph—

Is professor of materia medica and therapeutics in the University of Glasgow and physician to the Western Infirmary of Glasgow, 10523, 10524, 10624. Has practised in Glasgow and Edinburgh as hospital and consulting physician, 10524, 10525, 10632, 10639, he refused to give evidence in the Islington case, as he had not, ,and could not, obtain sufficient knowledge about the different kinds of whiskey and other matters, 10526–10529.

Experiments made by witness to distinguish between the different kinds of whiskey and other spirits: Instruments used, 10544, and their accuracy, 10545–10547. Result of these experiments: (1) On rabbits, no difference in the action of the heart, 10531–10535. (2) On young men, very little action at all either on pulse or heart, 10536–10543. (3) On patient suffering from pneumonia: Could trace no difference in results from pot still or patent still whiskey, 10551. (4) On himself, 10552, 10553, 10558-10560, particulars of spirits used for this, 10554–10557, all pure of their kind, no blends, 10566–10568. Effect the same in all cases, only producing slight drowsiness and slight flushing of the face at the beginning, 10561–10566, 10569–10572, 10611, 10612. Conclusion from these experiments: that the only effect produced was due to the alcohol, 10548–10550, 10570, 10571, 10613, found no difference from kind of spirits used, 10588–10593.

Whiskey used for medical purposes: Witness has not noticed any change in the last twenty years in the amount of whiskey used in Scotland, it has always been the chief spirit used in his experience, 10582–10584. Used for its alcoholic value, 10585, 10637, would probably get the same benefit from rectified spirits, though not so pleasantly, 10586. He attributes some value to flavour, but this is chiefly a matter of taste, 10634–10636, 10638.

Whiskey as a beverage: Witness cannot testify to the difference created on the thirst by either kind, but believes pot still is capable of more dilution, 10597–10600, has made no analysis of these, 10601, 10602. Has noticed no ill effects on the health from drinking any particular whiskey, 10619–10623. Thinks most people in Scotland would know the difference between patent still and pot still, 10641, their choice depends on which flavour they prefer, 10642, but most would prefer pot still, 10643, 10644.

Maturing of spirits: Witness thinks whiskey certainly improves by keeping, but this is a matter of taste, raw spirits being much coarser, but has noticed no difference in their effect, 10573–10576, 10607 10609, has no knowledge of bad or cheap whiskey, 10577–10581, 10654, 10657, has heard that whiskey spoiled in the making is sometimes sold, 10658–10660, thinks probably much raw spirit is drunk in Glasgow, 10625, 10626. Witness has seen a good deal of alcoholic disease, especially alcoholic neuritis, 10628, 10633, but cannot attribute this to raw spirits, 10627–10631. Case of madness after drinking whiskey, probably due to quantity taken, not quality, 10653–10656; rectified spirit would also have this effect if enough were taken, 10655, 10656.

Bye-products: No effect from these except flavour, 10594–10596. It would be interesting to find out the comparative amount of these in the different whiskies, 10604, 10606. Their presence in spirits adds to the pleasantness, 10614–10618, 10636.

Blends: Witness thinks these are a great deal drunk, 10645–10647, 10651, but cannot say whether it is on the increase, 10648–10650. Thinks these equally satisfactory for medical purposes, 10652.

TATLOCK, Dr. Robert Rattray—

Has been an analytical and consulting chemist in Glasgow for forty years, 5407, 5408. Is President of Society of Public Analysts, 5409; member of the Council of the Institute of Chemistry of Great Britain and Ireland; Fellow of the Royal Society

of Edinburgh, and of Chemical Society of London, 5410. Is public analyst for Glasgow, Perth and fourteen burghs in Scotland, 5411, and official analyst under the Fertilisers and Feeding Stuffs Act for Lanark and Dumbarton, 5412. Witness has been a great deal consulted by both pot and patent still distillers, and has visited many Scotch distilleries and analysed a large number of both products, which analyses he hands in, 5413–5423. Witness is often consulted as to bad flavour, injurious adulteration, etc., of whiskey, 5558–5663.

Definition of whiskey: Witness would rather see limitations with regard to materials used in distillation, 5543. He would restrict these to cereals and limit the conversion to the diastase of malt, 5544–5547, 5696, and would apparently not admit the amylo process, 5548–5551. Witness considers that flavouring material can be added to whiskey, and the product will still remain whiskey, but that no additions to silent spirit will entitle it to be called whiskey, 5551–5555, 5693–5696. Maize, a wholesome maltable grain, is included in witness's limitation, 5556, 5615, 5616. If it were decided that patent still whiskey made in Scotland was not whiskey, then a blend could not be called Scotch whiskey, unless proportions were given on label, 5610–5613.

Analytical standard, as suggested by Dr. Teed, would condemn fifteen out of forty-eight pot still whiskies examined by witness, 5528–5533, and must be futile, 5557–5559, as chemical analysis is of no value in determining nature of materials, 5560–5562, 5697, 5698. Witness gives comparative analyses of rye and Bourbon whiskey with Highland and Lowland malt whiskey to show this, and also that one could not distinguish them analytically from brandies, 5563–5566. Witness considers that proportion of ethylic alcohol and the flavour are the chief factors in the value of whiskey, 5506, 5570. If any standard dependent upon analysis were fixed, it ought to be done by some central board, and not left to public analysts. Witness thinks some anomalies exist in the application of the Food and Drugs Act, 5605–5609.

Patent still product: Witness thinks, and has always thought, that this has equal right with pot still product to be called whiskey, 5464–5469, 5521, 5688, 5689. In 1898 witness stated in a report to the Corporation of Glasgow that any deleterious effects of whiskey applied equally to pot and patent still, 5470–5480. Witness does not regard the latter as silent spirit, as it has a distinct flavour, 5518–5520, and quotes Dr. Teed to this effect, 5522–5527. Certificate by Dr. Bell in regard to the products of Wallace's patent still, 5576–5581. Certificate by Dr. Clarke (public analyst for Glasgow) of the excellence of Cambus whiskey, 5585, 5586, which contains half the amount of bye-products in Tobermory pot still whiskey, 5603, 5604. Witness has lately analysed a pure malt whiskey made in a patent still, which had all the characteristics of the pot still product. The still was run at a lower strength, and other alterations might have been made, 5618–5625. Witness knows that patent still whiskey has been used in Scotland as whiskey for forty years, 5683–5689. Patent still usually contains very little furfural; absence of furfural, however, not necessarily indicative of patent still spirit, 5512-5514, 5517.

Bye-products and health: Two years ago witness extracted, by the ether and chloride of calcium method of Dr. Bell, the bye-products from three bottles of pot still, and swallowed them on one day, and repeated the experiment with the same amount of patent still the next day, and in neither case was any effect apparent, 5485–5489. Some more experiments in much the same way, with regard to the alleged poisonous nature of volatile products, had also no effect, 5500–5505. Witness could not distinguish between these products, except by the quantities being greater in the pot still, 5690–5692. The higher the bye-products are, the more toxic they are, so that if anything injurious were present in whiskey, it must be more in pot still than in patent still, but since the proportions are so small, they can do no harm, 5615, 5616. A wine glassful of Highland whiskey would contain one twenty-fifth part of the minimum dose in the British Pharmacopœia for acetate of ethyl, which is the chief ether present in these whiskies, 5506–5511. Witness does not think there is any whiskey sold that is not wholesome, although sometimes it is spoilt in distillation, and has a bad flavour. Injurious effects of whiskey are entirely due to the quantity drunk, not the quality of the whiskey, 5664–5679. This was the gist of witness's report in 1898 to the local authorities of Glasgow, 5679–5682. Advantages of removal of one to two-thirds of the fusel oil, etc., present in pot still whiskey. Dr. Bell on Wallace's patent still, and Mr. Allen on Scott's process for effecting this, 5576–5583.

Analysis: Although ethers vary widely in witness's analyses, the average is much the same, 5424–5432. Methods adopted by witness were the Allen-Marquardt, in which his results are compared with those of Dr. Schidrowitz, 5433, 5439–5458, and colorimetric method adopted by Dr. Teed, using isobutyl control, 5433–5436. No possible factor will reduce the figures obtained by one of these methods to those obtained by the other, 5437–5439. Witness gets practical overlapping of coefficients of Highlands and grains by the Allen-Marquardt method, 5458–5460, but by the colorimetric process, a great over-lapping is apparent, 5461–5463, though the average patent still contains about half the bye-products present in the pot still, 5516, 5526, 5527, 5534–5539, and quotes the evidence by Dr. Bell before the Select Committee to enforce this assertion, 5539–5543. Allen-Marquardt is the best and most generally used method, though it has been objected to on account of incomplete extraction of propyl, and witness agrees with Dr. Schidrowitz that the colorimetric process is unsatisfactory, 5633–5638.

Maturation: Dr. Bell did not find any changes except those due to concentration in the bulk in the cask, and Messrs. Crampton and Tolman in America find the same in the case of higher alcohols, though the ethers proper and the volatile acid have increased, 5571–5574, and witness does not think new whiskey any worse for the health than old, 5639–5657. Characteristic aroma of American whiskey is due to maturation in charred cask, 5616.

Fractionation: This is certainly effected by the pot still process, and there is no fundamental difference between pot and patent still methods, 5587–5589, 5602. Witness describes the result of experiments as to elimination of the bye-products to show this, 5590–5602.

Public taste has altered in the last twenty years in the direction of a more mildly flavoured whiskey, 5574, 5575. Witness states that in 1828 raw grain was used in the mash, 5616–5618.

Recalled—

Witness gives particulars of a new process of distillation which is added to the ordinary patent still, and produces a softness which is a feature of matured whiskey. The process, which is patented, is working at the Stronachie Distillery, Perthshire, belonging to James Calder and Co., and was invented by Mr. Carroll. It consists in passing spirit vapour into a pipe, jacketed with super-heated steam. A preparation of super-heated air is mixed with the spirit vapour, which is then condensed as usual in the worm. Witness thinks the result is due to the removal, probably by oxidation, of the specific chemical substances, which give its harshness to new whiskey. His object in bringing it forward is to request the Commission, if they should recommend compulsory bonding, not to bar possible improvements of this nature, 11942–11977.

TEACHER, Mr. William C.—

Is blender and Highland malt distiller, 7469–70. Distillery in West Aberdeenshire established since 1898, 7505–7507.

Witness considers it unnecessary to place restriction on the sale of Scotch whiskey, 7471-7475; and thinks that proportions of whiskey, etc., are best left to laws of supply and demand, and not protected by legislation, 7494–5, 7521–7541.

Witness mentions the large variation in public taste. More grain spirit added recently, price not affected, the grain spirit being older than the pot still, 7476–7484. This is largely the tendency of public taste in North of England, 7508–7511.

Blending: Witness is totally against labelling proportions of grain and malt spirit used, as he considers it would be more misleading than otherwise to the consumer, who is guided solely by his taste, but witness does not like to see Scotch whiskey with 5 per cent. malt sold to any large extent, 7485–7493,

7515, 7516. Average age is about five years, and witness considers that grain whiskey requires ageing, but to a less extent than malt whiskey, 7543–7548. Proportions of blends sold by witness, 7549–7551.

Compulsory bonding: Witness does not approve of this, as, by so doing, English gin, which has been displaced to a large extent during the last twenty years by Scotch whiskey, would come in again, as its cheaper price to retailer would militate against Scotch whiskey, 7498–7503.

A whiskey drinker can easily distinguish between pure malt whiskey, grain whiskey, and a blend, 7513–7515.

Witness does not approve of grain spirit being excluded from definition of whiskey. He thinks it is the least harmful and very well suited to those of sedentary occupation, who often drink it, 7554–7562.

TEDDER, Mr. Arthur John—

Is chief Inspector of Excise, 1; has been in the service thirty-six years, 2; is chief adviser to Commissioners of Inland Revenue on distillery questions, 4; is called to give explanatory evidence on manufacture and supervision by Excise of all potable spirits, 3.

Definition of British spirits as spirits liable to Excise duty, i.e., all spirits made in this country, 5–7. Plain spirits are British spirits without any flavours added or ingredients mixed with them, 8. British compounds are spirits altered by addition of flavours and other ingredients, 8. Proof spirit: defined as "spirit which at a temperature of 51° F. weighs exactly twelve-thirteenth parts of an equal bulk of distilled water," 10. Rate of duty on British spirits is 11/- per proof gallon, 11; paid when spirit leaves control of Revenue, 13. Total net duty for last year in England, Scotland and Ireland, 12; number of gallons made therein for a year, 14. Bulk of this would be bonded, some would go for methylation, some for exportation, 17. Estimated "consumption," that is the number of proof gallons of duty paid spirit, divided by total population, 15–22, 265–268.

Distilleries: Number of, in England (8) Scotland (150), Ireland (27), a few not working in each, 23–4. Classification of distilleries as using pot still, patent still, or pot still and patent still, 25; these are not all separate firms, 26–7. All figures are for last distilling year, 28; very little increase recently in any class, 29. Classification of distilleries according to materials used, 48. Kinds of unmalted grain used in pot still, 49; and patent still distilleries, 50. Excise officer takes account of everything in distillery after worts are collected in wash, 68, 83, 278–280.

Materials: List of, used in manufacture of British spirits, 34. No legal restriction as to materials used, 35–37, 248–254, 302–311; except molasses, on which there is a Customs duty, 58. Distillers can only make plain spirits, 57, 59–60. Distillers make a return of materials used under Statute, 61–2, 64–5. Forms of returns, 63–65, checked with Excise officer, 67.

Quantity of materials: Used in England, Scotland and Ireland, 37–8. In Ireland and Scotland malt and unmalted grain only used, 39–40. Totals of materials used, 42; estimated production of spirits from malt and other materials, 41, 44–47; proportion of malt to unmalted grains used in United Kingdom, 51–2.

Process of manufacture of spirits, mashing, fermenting and distilling, 55–6. Attenuation of the wash, 56; attenuation charge, 84–5.

Pot stills: Character and working of these, 68–70; and their sizes, 73; no material difference among them, 228–9. Varying rate of distillation, 74–5; character of worts used, 80; heavier in pot still, 81; greater percentage of proof spirit, 82; utensils employed and methods of Excise officer's control, 84–86. Strength of spirits in receiver, 87–8; and when bonded, 89; most spirits from these stills are bonded for some years, part is blended, a little goes direct into consumption, some is exported, 129.

Patent or Coffey stills: Character, working, and sizes of these, 71–2. Varying rates of distillation, 74; use of rectifying stills with these to get purer alcohol, 75–79. Maize used, 300–311; character of worts used, 80; molasses wash always distilled in patent still where they use more diluted wash, 81; less percentage of proof spirit, 82. Utensils employed, etc., 90. Strength of spirit in receiver, 94; higher than pot still, 95; but when bonded usually same as pot still, 96–7. Large proportion of spirits made from molasses used for methylation, etc., 134, 187–190. Some used for blending, 136, 312, 313; all British spirits used by rectifiers are from patent still, 182, 315. Fusel oil in patent still, 90; use and price of, 91–93.

Patent and pot still spirit: Comparison between prices of these, 189–196, 281–283, 310; distinction between these stills, 224–227, 297–301. Maize is principal ingredient which is peculiar to patent still, 305–311.

Methylation of spirits: Definition of methylated spirits, which are used "duty free" and are non-potable, 135–6. Industrial (used only by authorised person) and mineralised (sold largely retail), 136. Patent still spirit used, 187, 188, 271. British spirits now only used for methylation, 198; because of price, 199–201.

Spirit can only be removed from receiver by revenue-locked taps to spirit store where it is in locked vats, 98–100; for short time only, 101; then racked into casks, marked, 102, 103, 111, 112, 122–125; and removed to ordinary distillers' warehouse, 103, 104, 121, or distillers' bonded warehouse where customers can stand as official owners, 105-6. Preparation of spirits by distillers for customers. Addition of water and colouring matter, limits of this, 108; for spirits for exportation no limits, 108–9. Bottling of spirits by distiller, 113–4.

Payment of duty: After this, spirits may be sent into consumption, 109; or kept in duty-paid store, 115–6; whence however distiller may not sell spirits in small quantities, 117–8; but may rack into suitable casks, etc., 119–120; allowance for evaporation, etc., 237–8.

Without payment of duty, spirits may be warehoused in vat warehouse or in distillery bonded warehouse, 255–6; or sent to Customs for exportation or as ship's stores; or spirits may be sent duty free to authorised persons for methylation, 109–110; or put in Customs or Excise warehouses, 109, 142–146.

Removal of spirits from distilleries: Regulations, and permits necessary for this, 137-141.

Bonded warehouses: Quantity of British spirits in these, 204–208; relation of this to consumption, 212–3; loss in these warehouses, 214. Length of time stored, 215, 230–234. Customs or Excise warehouses, 109, 142–146; racking in these, 149; vatting or blending, 150 *et seq.* Other operations in these, 167. Revenue regulations governing all operations, 168–175.

Blending of spirits: Little done at distilleries, 127–8; export trade in blended spirits, 129; definition of blending, 130–131, 156–7; object of, 132–134. In Excise warehouses, 150, 258–264; spirits marked "Mixed," etc., 151–154, 161, 272–274; percentage of pot and patent still spirits in blends, 158–9, 160, 284–289. Excise have no legal power to ask proportions of blends, 162–166.

Compounded spirits: Rectifier with a still. 178–180, 185, 186. Rectifier without still or compounder, 178–181. Patent still spirits used by rectifiers, 182; quantities of, 183.

Dealers in spirits: Revenue control over these, 216; and their stocks, 217–8; and over preparation and sale of spirits by them, 219–220; publicans, 275–277.

Consumption of spirits: Decrease in, figures, etc., 33, 209–211. Consumption for last ten years, 30–32. Relation of quantity of spirits in bond to consumption, 212–3.

Arts and manufactures: Quantity of spirits used, etc., 109, 201–203, 315–6.

Whiskey: No official definition of this term, 235–6; boom in whiskey, 239–242. Flavour of pot still whiskey, 290–296; and the difference of price and flavour between pot still and patent still whiskey, 281–283, 297–301; and percentage of blended whiskey, 284–289.

Yeast-making distilleries, 53–4; list of, etc., 243–247.

Foreign spirits: Reference to Customs, 269–271.

Recalled—

Witness hands in documents relating to—

(1) Law and practice of the Board of Customs as regards imported spirits generally.

(2) Procedure of Customs under Merchandise Marks Act.

(3) Powers and duties of a Revenue Board in connection with potable spirits.

(4) History of Section 69 of the Spirits Act, 1880.
(5) Mixing of British and foreign spirits in bond.
(6) Early use of patent stills in the United Kingdom.
(7) Growth of use of patent still; and,
(8) Quantity of spirit manufactured from different materials.

(*See* Appendix T), 18429–18432.

Enumerated and unenumerated spirits, 18443–18445, 18447. When taken from the duty-paid stock, however, spirits may be variously described; and a mixture of them might be called brandy without interference, 18450. British brandy is termed "British compound" by the Excise, 18451.

Several interesting changes have taken place since the Commission first met. Alcohol has been made from wood, for the first time in this country, but none of it has been disposed of for potable purposes. One Scotch pot distillery has used sugar combined with its malt, and another has employed maize for the first time, 18465. There have also been experiments with the amylo process, but this method could not be worked without alteration of the Spirits Act, because the specific gravity of the worts cannot be ascertained by the prescribed saccharometer, 18473, 18481.

The public is protected against methyl alcohol in wood alcohol by the operation of the Spirits Act on the vendor, 18479–18480.

Excise officers have no control over labelling in bond except in cases where public morality is involved, 18495–18501.

TEED, Dr. Frank Litherland—

Is a Doctor of Science (London) and Public Analyst for Borough of Islington, for the City of London and the Borough of Camberwell, 3037, 3038, and is an analytical and consulting chemist in practice and a barrister of the Middle Temple, 3039, 3040.

In 1904 witness was requested by Islington Borough Council to ascertain whether the terms "Irish Whiskey" and "Scotch Whiskey" could be defined and whether those terms belonged exclusively to pot still products, also, supposing they could be defined, whether it was possible to distinguish them analytically from patent still spirit, 3041, 3045. Inquiries extended over a period of six months, during which time witness analysed about 50 samples of whiskey and visited eight or nine distilleries in Scotland and Ireland, among which was one patent still, before giving definition and standard of whiskey, 3042–3048, 3254–3301. He also read the Report of Committee of 1890–91 and the article on spirits in the Encyclopædia Britannica (Dr. Schidrowitz), etc., 3049–3054.

Witness quotes extracts from poems of Robert Burns to show that the Scotch drink was distilled from barley and called whiskey, 3055–3059, the word "whiskey" is used several times, and the "stills" used must have been pot stills, as no others were known at the time, while the poem entitled "John Barleycorn" shows use of barley, 3060–3066. It is shown, however, from Report in 1798, that unmalted grain was used considerably in Scotland, 3365–3376, 3386, 3387. With regard to term "Scots Bere," this is shown to mean a six-rowed barley quite different from present two-rowed barley used, and this probably affects flavour of spirit, 3377–3385.

Papers by Dr. Schidrowitz: Witness has not read any of these since the article by this authority in 1902 in Encyclopædia Britannica, 3438–3441, from which he quotes with the object of proving that the author regarded pot still spirit and "whiskey" as synonymous terms, while he referred to patent still or grain spirit as being equivalent to "silent spirit," *i.e.*, spirit without any appreciable bye-products, 3082–3092. Witness brought this forward as evidence at trial, 3650–3652. It is shown, however, to witness that, since then, Dr. Schidrowitz has considerably modified his views, 3442–3443, and states that grain whiskey, "with a very considerable whiskey flavour," is produced in patent still, 3446–3449.

Definitions suggested by witness: "'Scotch whiskey' is spirit distilled in Scotland from fermented wort derived from barley malt in a pot still." "'Irish whiskey' is spirit distilled in Ireland in a pot still from fermented wort derived from malt, or malt and barley, with or without addition of oats, wheat and rye or any cereals indigenous to Ireland," 3106–3111. Both Irish and Scotch whiskey have peculiar and distinctive flavours and characteristics, 3114, 3115. Witness's definition allows raw grain to be used for Irish, but not for Scotch, whiskey, though it is shown that raw grain is used sometimes in Scotch pot still distilleries. Witness agrees that this would have influence on his definition, which was based on what is most generally known as Scotch and Irish whiskey, 3311–3326, 3340–3342. Witness consulted about 12 members of trade and 20 or 30 members of public, 3334–3342, but several experienced witnesses and proprietors of pot still distilleries do not accept definition, 3343. No legal definition of whiskey attempted in Report of Select Committee, 3436–3437, but witness maintains that all witnesses stated that "whiskey" applied to pot still product, 3067, 3069–3081.

Restrictions on materials and apparatus used for manufacture of "Scotch" and "Irish Whiskey"; would not prevent improvements, as, if a product of the "nature, substance and quality demanded" could be otherwise produced, witness would pass it as Scotch or Irish whiskey, 3612–3631; analogy between this case and flour production, with ordinary and roller mills, 3633–3644.

Pot still whiskey: Process of distillation, 3120–3122. In pot still all the bye-products and any essential oils are distilled off with spirit and are present in the finished whiskey, as the pot still is in no way a fractionating apparatus, 3122, 3123, 3130–3132. Witness gives analyses to support this, 3124–3129, 3453–3533. Impossible to obtain spirit as pure as patent still spirit in a pot still without chemicals and rectifying column, 3148. The term pot still would still be applicable if heated by steam instead of fire, but not if fitted with rectifying column, which, however, does not include the Lyne arm, 3305–3310. Irish stills are larger than Scotch, 3302–3304. With reference to evidence given before the Select Committee witness agrees that this shows, not that pot still product was exclusively whiskey, but merely that it was whiskey, 3396–3399.

Witness agrees with evidence given before this Commission to the effect that the Scotch pot still distillers are afraid of the blenders, and thinks evidence seems to show that some pot still is made unfit to drink unblended, 3177–3181. Proprietors of Dewar's whiskey gave an exhibition to show what whiskey was, and exhibited only pot still method, showing that they believed that Scotch whiskey was malt spirit made in a pot still, 3093–3097.

Patent still spirit: No evidence before Select Committee showed that patent still spirit was called "whiskey," 3068, and witness would never allow it to be so called, 3332–3335, as he thinks it is impossible to obtain a spirit of chemical composition or characteristics of Irish or Scotch whiskey from patent still, though it might be possible to obtain a less pure spirit by changing the position of spirit plate, 3147. Patent still is a fractionating apparatus in which the steam used hydrolyses the compound ethers, 3134, 3138, 3139, 3513–3515, though, it is pointed out, Dr. Schidrowitz has shown that in the pot still there is hydrolysis and oxidation which prevents accumulation of the bye-products. Witness does not agree, and thinks that feints do not accumulate, because composition of whiskey is practically same as composition of low wines, 3520–3533, 3666, 3694–3732. Scotch patent still spirit and Irish patent still spirit are similar in flavour, 3664, 3665. Witness has not been able to detect any flavour of whiskey in patent still spirit, and considers that there is no difference between this product, whether distilled in Ireland or Scotland, 3112–3119. Witness can detect no maize flavour in patent still spirit, from which he deduces that all essential oils of the grain are removed, 3146. Witness would have expected permission to call patent still product "whiskey," to come from Excise, 3400–3406, though Mr. Wilson said that patent still spirit has always been whiskey, 3407, 3408, while Sir A. West also said that term whiskey is applied to spirits distilled in patent still, 3410–3413. Witness would not allow any spirit made from maize to be called Scotch whiskey, 3327–3331, though it is included under "grain" in the generic definition of whiskey, 3345–3346.

Analysis: Analytical standard taken by witness was that the sum of the bye-products should not be less than 380 parts in 100,000; this was obtained by taking samples from 24 pot and two patent still distilleries. 3206–3214, 3534–3560. Colorimetric method (Girard

and Cuniasse) was adopted with isobutyl as control, 3150–3176, 3668–3678a, 3733–3748, 3754–3758. A comparison of these results with those of Dr. Schidrowitz shows an overlapping of pot and patent still co-efficients which, if correct, means that standard is too high, 3561–3595; but this method could not be used for giving a general standard of whiskey, as different observers obtain different results from it, 3769–3822. Allen-Marquardt is, however, unsatisfactory, 3733–3748, 3754–3758. Tests by witness made with this method, 3904–3916. Aldehydes in feints, 3133, large loss due to "ether pipe," 3140. Average quantity in raw pot and patent still products, 3141. Analysis of spent lees and spent wash, foreshots and feints, 3679–3732, 3759–3765, 3900. Furfural as an indicator, 3604–3609, method of separating it, 3901–3904. Recent analyses carried out by witness do not suggest any modification of his original standard, 3823–3828.

Blends: Witness objects to these ever being sold as whiskey, however small the proportion of patent still product present, as when a man asks for whiskey he presumably desires pot still with its full flavour, whereas in a blend he gets it diluted with a cheaper product, so that there is an injury both to his purse and palate, 3851–3899. Not the same objection if it is definitely stated on the label that it is a blend as then the customer is not prejudiced, 3347–3364. With reference to Evidence before Select Committee by Mr. Molyneux, Dr. Bell and Mr. Cobden Samuel on subject of blending and restriction thereto; where witness quotes them as supporting his contention, it seems likely that in many cases they were referring to German spirit and not to English patent still product. Witness thinks they are much the same, but has not examined the foreign spirit, 3414–3435. Analysis of blends, limits of accuracy of this, 3596–3603. If co-efficient very near to 380, a blend could not be detected by using it alone, 3829–3844.

Sale of essences for making whiskey, brandy, etc., 3916–3919.

Cambus: Sold as "Grain Whiskey," misleading nature of this term, 3099, though Sir James Dewar gave definition of whiskey, which practically said that whiskey and spirit are synonymous, 3100–3102, and also said that his friends found no evil effects after drinking this when doing sedentary work, although they had bad effects from pot still whiskey, 3182, 3183.

About 1786 Lowland distillers started using a small still which was emptied much more frequently, and so manufactured spirits which were alleged by the Highland distillers, who retained old large stills, to carry over more impurities than by old methods. Witness does not think this is at all similar to the present pot and patent still question, 3387–3394.

Public analysts: Their duties and difficulties, necessity for a central body of appeal, 3645–3653. Witness does not consider the Society of Public Analysts to be an authoritative body, 3750–3752.

Brandy cases: Witness gave evidence in these cases, 3189–3192, and proved that true brandy must be made by pot still, 3236–3242, although definition of brandy was not contested; question of minimum standard of compound ethers necessary to differentiate between grape spirit and mixture of grape and grain spirits, 3250–3253. Witness does not consider that corn spirit could be called brandy, 3654–3657. Defence in these cases did not admit that grain spirit was added; there is a definition of brandy in the British Pharmacopœia, 3658–3663. British brandy is rather like brandy diluted with patent spirit, 3233–3235.

Rum: Convictions in this connection on evidence by witness, 3193–3199. Witness considers that Customs should prevent importation of imitation rum and brandy, 3200–3205.

Recalled—

Witness reads a letter in which he asked to be recalled, to refute some statements, made by Sir Robert Usher, in the case of analyses done by witness, for Sir Tatton Sykes, of whiskey supplied by Messrs. Peters, Hall and Company, also with reference to an analysis for Mrs. Cockburn. These statements cast grave doubts on witness's analytical skill, as they entailed three large errors which he thinks might be due to the carelessness of a cellarman in drawing the samples, and suggests gravest doubt as to identity of samples. If the Commission thought any point depended on his skill or methods, he was prepared to submit analyses of as many different samples as the Commission cared to send him. Dr. Brown considers this course unnecessary, 10444-10449.

Recalled—

Comparative analysis of Jamaica and Demerara rums: Witness gives figures obtained by analysis of these rums, which show that Jamaica rums are much higher in ethers than Demerara rum, 14086–14099, 14102, 14103.

Manufacture of rum: Jamaica rum is made from mixture of molasses and cane juice, while in Demerara rum molasses only are used, as rum is a bye-product, Demerara sugar being chief produce, 14110–14115. Flavour of Jamaica rum is largely due to non-alcoholic secondary products; that of Demerara rum is partly due to added burnt sugar, 14116–14120. Molasses imported and fermented in England give a product utterly unlike rum, owing to the extent to which the yeast used affects the flavour, etc., of the product; this applies also to other fermentations in this country, 14121–14124. Witness has no actual knowledge of where essences are used for making imitation rum in this country, 14125–14127.

Analytical standard for rum: Witness suggests 150 parts of ethers as a minimum, 14127–14132, though Mr. Cousins puts minimum at 90 of ethers, 14134–14138. Witness quotes, from West India Committee's circular of 1906, a return prepared by Professor Harrison, Government Analyst of British Guiana, giving proportions of ethers in rum distilled in British Guiana in 1904 and 1905, 14104, 14105.

Rum prosecutions: Two of these instigated by Mr. Nolan, Commissioner for Jamaica, ensued from witness's analyses, and both defendants pleaded guilty, 14106–14109. The prosecutions were under the Merchandise Marks Act, and ethers were in both cases below 90, 14139–14143.

Recalled—

Definitions of brandy: Witness quotes Murray's Dictionary, 16883, Allen's "Commercial Organic Analysis," 16884, and the article on "Alcohol," by Stokes, 16888, to the effect that, properly, brandy is derived from grapes, although the name is applied to liquors of the same general flavour and appearance, not produced from wine.

He defines brandy as a spirit distilled entirely from the produce of the grape in a pot still, and not too highly rectified, 16892–16893, and would not confine the legitimate use of the word to French examples, 16894.

Analysis of brandy: The great advantage of the colorimetric process for the higher alcohols is that it affords a bond of comparison with the results of French chemists. The Allen-Marquardt method would not have this advantage, 16928.

Reference Board: Witness advocates the formation of a standing Board of Reference for all articles of food, 16930. The Board would sit and take evidence, summoning different classes of the community, 16944–16945, and they might be called upon to assist magistrates, 16951. The establishment of such a body would, however, be a matter of some difficulty, 16960.

THOMPSON, Mr. A. C.—

Is a member of firm of Messrs. John J. Anderson & Co., Limited, dealers in rum and spirits generally, 14797, 14798.

Jamaica and Demerara rum: Witness agrees that a differentiation in marking between these might be advantageous to the consumer, although it is not necessary for the dealer who is guided by price, 14808–14825, 14828. Jamaica rum is usually thirty per cent. higher in price than Demerara rum, 14805, 14806. Witness does not think that a mixture of plain spirit and Jamaica or Demerara rum ought to be sold as "Rum," his firm never doing this, 14826–14836, 14854, 14855, 14871, 14872. He thinks, however, that it is done for both the home and export trades, 14859–14862, and should not think it would make a bad liquor, 14869, 14870. If molasses spirit exported from West India were used witness would not object to calling the mixture "Rum," 14873–14878. He considers there would be great difficulty in stopping mixture of plain spirits with rum, 14863–14868.

Blending: Witness's firm sells a blend, compounded by themselves, of pot and patent still rum known as "Liquid Sunshine," 14799, 14800. Old rums are often blended and reblended with new rum to improve the flavour. Witness does this in bond both for home and Australian trade, 14848–14858.

Witness considers that rum has a greater food value than other spirits, this being due to the amount of sugar present, 14801, 14802, 14837–14847.

"German Rum" is imitation rum; witness exports only fine Jamaica rum to Germany, 14833.

THOMSON, Mr. George—

Is a retail wine and spirit merchant in Glasgow, 5761–5764, 5833–5837. Has been twenty-five years in the trade, fourteen on his own account, 5765–5767, before that was salesman, experience much the same in both cases, 5824–5830. Average customers about four hundred a day for whiskey, beer and other drinks, 5767–5771. Witness gets his whiskey from distilleries, 5777. Sells Cambus whiskey, Glen Burgie, proprietary blends and pure malt whiskey, 5772, 5773, 5792, and witness considers all these are "Whiskey," 5796–5798. Customer receives whiskey according to what he asks for and the price he is willing to pay, 5774–5776. Does not sell nearly so much of proprietary blends or malt whiskey; all are sold in the same way across the counter and in bottles, 5793–5795, average about five or six gallons a week, 5850. Strength of whiskey from twenty to twenty-two under proof, 5822, 5823. Customers, chiefly workmen of mixed trades; some prefer Cambus, some blends, but witness has not noticed any connection between a particular trade and a particular whiskey, 5838–5843. Has not noticed any difference in public taste since he began business, 5844–5847. Has no knowledge of the sale of whiskey in England, 5900–5902. Has not noticed any bad effects from either kind of whiskey, 5881–5883. He thinks there is a great difference in taste of malt and grain whiskey, and no confusion between them in the trade, 5903, 5904.

Blending: Witness does his own blending, proportions being about 80 per cent. grain and 20 per cent. malt, 5787, 5788, 5849. Proprietary blends have about the same sale as malt whiskey, 5811. Blends are known, and sometimes asked for as such, 5831, 5832.

Patent still whiskey: "Cambus Whiskey" is known and invoiced as patent still or as grain whiskey, 5778–5783, and customers know the difference between grain and malt whiskey, and also that grain whiskey is a patent still spirit produced from maize, 5784–5786. Witness has for twenty-five years sold more Cambus than anything else, 5851, 5852, about fourteen gallons a week being sold pure and twenty-one gallons in blends, 5799, 5804–5807, 5848. Patent still product improves with age, 5884.

Pot still whiskey: Witness sells very little of this, the flavour not being liked, 5800, 5801, 5881.

Labelling: All whiskies sold by witness are more than two years old. Cambus is generally three years old, 5815.

Comparative cost of whiskies, 5789–5792, 5808. Price per glass, 5774–5776, 5802, 5809, 5887–5890; bottle, 5819–5821, 5885, 5886. Proprietary blends are more expensive than own blends, 5810. They do not trade upon the ignorance of the public nor sell a cheap whiskey at a dear price, 5891–5999.

All whiskey commonly called "spirits" in Scotland, this being the old word, which did not apply to patent still spirits and was used before the invention of patent stills, 5853–5864.

Maturation: Witness's whiskey not sold under three years old, though he does not think the general public would know the difference in patent still whiskey unless it was only about three months old, 5865–5872, 5876, 5877, but this does not apply to pure malt whiskey, which takes much longer to mature, 5873, 5875, 5878, 5880.

THORPE, Dr. T. E., C.B., F.R.S.—

Is Principal of the Government Laboratory, 17742.

All spirits distilled in England are legally known as "plain British spirits," 17743. Patent and pot still products are subject to the same Revenue regulations, 17744. He receives samples sent by magistrates under the Food and Drugs Acts, and in no single instance has the point at issue been whether the whiskey has been properly described, as *e.g.* "Scotch" or "Irish," 17754–17761.

The question for brandy is usually whether it is British or foreign, 17762–17771. Rum and gin are practically always examined as regards deficiency of strength, 17778–17779.

The analyses of samples supplied by Government contractors for hospitals, etc., show no special toxic properties, apart from the ethyl alcohol, 17809–17810.

The periodical examinations of spirits sold in low-class localities show a non-injurious patent still, mixed perhaps with a small quantity of pot still, 17813–17829.

In witness's opinion, the benefit of the lower cost of production of patent still is felt by all concerned, 17858–17860.

It is exceptional to have over-lapping between pot and patent still spirits as regards percentage of secondary constituents, 17865–17869, 18083.

Patent still spirit generally contains no furfural; the traces found after storage in wooden casks being due to soaking out from the wood, 17872.

Scotch whiskies show, in the main, a somewhat smaller total amount of secondary bodies than the Irish, 17872–17875, 17894–17896.

Witness cannot give many results of analysis of samples whose origin is well authenticated, as regards brandy and rum, but the tables of Girard and Cunaisse show that brandy, like pot still whiskey, varies considerably, both as regards the total secondary constituents, and in each of them, 17911.

There is usually a large percentage of esters in rums, varying greatly in amount, on account of the fact that there are both blending and drinking rums, 17913–17914. It is impossible to draw any inference on standards, owing to such wide variation in composition, 17922–17923.

Analyses from the same cask of spirits, at intervals of six months, extending over a period of seven years, show a progressive diminution in the percentage of absolute alcohol, and a change in tint from water-white to sherry colour. The non-organic solids, in solution, and the volatile acids, remain fairly constant; while the aldehydes and acetic ester tend towards a slight increase. The higher alcohols give a marked increase, on account of the loss of ethyl alcohol. Furfural remains constant, 17924–17931.

There are practically no changes when the spirit is stored in glass, and this fact is of great importance with regard to the question of identifying particular spirits, 17941, 17943–17947.

The Government Laboratory method differs from others, and is suited to rapid examination, and the small quantities submitted under the Food and Drugs Act, 17951–17956.

From a chemical standpoint, there is a very considerable difference between the pot and patent still process, 17964–17966.

There is a great difficulty in imposing any method of control of the nature and proportion of patent and pot still products in mixtures, based on chemical data, due to the fact that, in both classes of spirits, the amount of secondary products varies very widely, 18013–18014. As regards whiskey, any fixed chemical standard, founded on any of the individual secondary constituents, would be useless. The minimum limits are always apt to become the ordinary basis of trade, 18018–18023, 18060–18071.

The influence of age on whiskies generally tends to be exaggerated in view of the relatively higher price of the matured spirit. Brandies become more valuable with age, to a certain extent, and wines show a marked improvement. The fully-matured age of whiskey may be placed at about eighteen months, 18028*a*, 18059.

Witness gives the following definitions—

Whiskey: A spirit distilled from a fermented liquor obtained from cereal grains. He would not advocate any particular method of saccharification, but would leave the matter to the discretion of the manufacturer. The primary point is the derivation from grain.

Brandy: A spirit distilled from fermented grape-juice alcohol.

Rum: A spirit distilled from fermented liquor, prepared from cane sugar, molasses and sugar-cane residues.

Witness would place no restriction on the character of the fermentation or of the distillation of whiskey. Any subsequent qualification is a matter which should depend upon the vendor, and that individual should be held responsible for such qualification, 18037–18045, 18074.

The principle that vendors' advertisements, circulars, and so forth, should be regarded as in the nature of warranties of their goods, is well worthy of general adoption, 18079.

He would not consider that the making up of patent to pot still standard is fraudulent; such practice may be legitimately termed blending, 18084, but the addition of substances which simulate the natural products of whiskey should not be allowable, 18086.

He discusses the formation of a court of reference for fixing standards and other regulations as to articles of food and drink, 18126–18128, perhaps Government departments should have a small committee of experts to which to refer particular questions, 18129.

The Government Laboratory, except in the case of absinthe, does not find poisonous or highly-injurious substances in its samples, 18177. The employment of such compounds as methyl alcohol is very rare, 18184.

In witness's opinion, flavouring agents and essences show no sign of highly toxic properties, 18189, 18206. Absinthe is little used in this country, and is only consumed by the foreign population, 18192. The methods of Girard and Cuniasse are employed for the verification of imported brandy, 18144.

Classifications based on flavour and aroma are too indefinite to be of use, 18050.

Witness would place no restrictions on the mixing of new pot still and patent still whiskies. Such mixtures are not injurious, and restrictions would tend to enhance the price of the article, 18056–7.

He would wish, in the general interest, that the meaning of the terms whiskey, brandy, rum, etc., should be universally recognised, 18075. It would be desirable to protect, as far as possible, both for the manufacturer and the consumer, the geographical and other considerations which connote a certain quality of article, 18049, 18076-18077. It would also be well if imitation brandies were always distinguished to the public by a name which is different from brandy, 18175.

He considers that the designation "Scotch" is equally applicable to whiskey produced by the patent and the pot still, 18195.

TINNE, Mr. Ernest—

Is Senior Partner of Sandbach, Tinne and Co., Liverpool, and Sandbach, Parker and Co., Demerara, 13718, 13719. Chairman of West India Association of Liverpool, and West India section of Liverpool Chamber of Commerce, 13720. Witness also represents the Demerara Company, Ltd., and the Plantation Leonora Limited, both of which companies have estates in Demerara, 13724, 13725. Witness's production of rum and sugar is about one-fifth of export of British Guiana, 13726–13729.

Definition of rum: Witness agrees with Mr. Aspinall's definition that it is the product of the sugar-cane made in a sugar-cane growing country, 13730, 13797–13800. He does not think that any restrictions as to process or materials are advisable, or that compulsory bonding should be imposed on manufacturers, 13731, 13765–13768. Though he thinks that rum is better when mature, his own product is sold at about two months old, and though he provides twelve months' free storage after that, this is not generally taken advantage of, 13736–13740, 13820, 13821. In witness's opinion it would be desirable, though not absolutely necessary, to mark all casks with country of origin and name of estate, this would distinguish Jamaica from Demerara rum and protect buyer from imitation rum, 13742–13745, 13749–13765, 13807–13812.

Distillation of rum: Direct fire heat is not used in Demerara, where the process used is much cleaner and more scientific than the Jamaican process. The article produced is equally pure whatever method of distillation is used, 13730–13735. English customers mostly prefer "vat still" product, 13735, 13777–13781. The ethers are the natural flavour and aroma of the rum, 13769–13776. The highly flavoured rums are not produced in Demerara, 13827–13830. Witness never mixes products of different stills or of different distillations of same still, 13823–13826. Jamaica rum is less popular and usually, though not at present, more expensive than Demerara rum, 13792, 13794–13796, the recent high price of which is due to large amount of sugar-cane and molasses used for making cattle food, and other reasons, 13487–13855. Witness does not know of any blending of Jamaica and Demerara rum, 13788–13791, 13793.

Imitation rum: Witness is unaware of any recent competition with this, 13746–13748, and thinks that it should still be distinguished as "imitation rum"; he regards the case as being similar to butter and margarine, 13801–13803, 13805, 13806, 13831–13848. He has been offered essences for making rum, 13803, 13804, 13813–13815. In one factory in Barbados artificially flavoured rum is made, 13813–13819.

TOWNSEND, Mr. Joseph Travis.

Is chairman of West, South and East of Scotland Malt Distillers' Association, 7225. Districts covered by Association, 7226, 7227. Is proprietor of a distillery in Orkney, 7228, 7229, where pure malt whiskey is made, 7230–7232. Was director of Linkwood Glenlivet and Convalmore, which are both pure malt distilleries, 7233–7235. Was managing director of Ardgowan, Greenock, which is a grain distillery, 7236, 7237.

Witnesses's definition of Scotch whiskey: A beverage suitable to public taste and health, from cereals made in Scotland, 7238, 7250, 7264, 7265.

Minimum quantity of malt whiskey in Scotch whiskey: Association is not agreed except that standard should be as high as possible, 7240, 7241. Witness considers personally that 50 per cent. malt and 50 per cent. grain is best blend, 7239, 7242, 7243, 7250, as pure malt does not suit him, 7243–7245, nor has it been successful on market, 7251, 7256.

Pure grain spirit: Witness has little experience of this, 7246, though has tasted good grain spirit, 7246, 7247. He would not allow this to be called Scotch whiskey, 7266, but only Scotch grain whiskey, 7267. Witness has no experience of silent malt whiskey, 7251.

Compulsory bonding: Witness approves of two years' limit, as all whiskies improve with age, and it is really part of the manufacture, 7248, 7249, 7252–7254, 7261, has no experience of applicability of limit to other beverages, 7261–7263.

Self whiskey: This has not been sold successfully, 7256. Witness does not make a self-whiskey at Orkney, 7255, it blues with hard water, 7257, 7259.

TROTTER, Mr. Henry Alexander—

Is a Partner in firm of Thomson, Hankey & Co., West Indian merchants, London, 13856, 13857.

The chief source of their rum is Jamaica, whence they get altogether 600,000 gallons per annum; though they deal with other West Indian Islands. The major part of the rum, both white and coloured, produced in these is consumed locally, 13856–13860, 13865–13870.

Definition of rum: Witness agrees with Mr. Aspinall's definition that it is the product of the sugar-cane made in a sugar-cane country, and he does not think there is any necessity for restrictions on process or materials, nor for a compulsory bonding period, 13871–13873, 13895–13900, 13906–13908. He does not think it would be possible to produce a rum of uniform composition, 13921–13927.

Jamaica rum: Witness distinguishes this from other rums as it contains more ethers, etc., than Demerara rum, this being due to soil and extra care taken in manufacture. He could distinguish between these if they were not doctored. The price of Jamaica rum is usually greater than that of Demerara, though this is not the case at present, 13874–13879, 13915–13920. There are two classes of Jamaica rum, the home trade rum being that sent to England, which is done soon after it is made. There is no demand for old rum, 13880–13884. Highly flavoured rum is exported to Germany, and there probably mixed with potato spirit to make a compound which is sold as rum; though witness cannot say if this is called imitation rum, 13882–13884.

Imitation rum: Witness knows practically nothing about this, though he has heard of it being sold. He states that no "essences" are used in Jamaica to

"doctor" rum, and considers the sattements in M. Pairault's book as untrue and probably prejudiced, 13901–13905, 13908–13914, 13928–13939.

TUNNICLIFFE, Dr. Francis Whittaker—

Is assistant physician at King's College Hospital and was professor of pharmacology there and member of the Departmental Committee on preservatives and colouring matter in food, 10661–10663. Has gone a good deal into distilleries, 10759. Only gave his evidence in the first case at Islington inquiry, 10761–10764. He thinks the question of whiskey as now sold might be regarded from two standpoints. (1) Whether it infringes the Merchandise Marks and Food and Drugs Acts. (2) Whether it affects the public health, 10664.

The effect of whiskey on health, 10665. (1) It may contain injurious constituents of which the public are not aware. (2) It may not be what the doctor prescribing it expects. Witness does not know that any whiskey contains other injurious constituents besides alcohol, which does both harm and good, 10666, 10676, 10758, 10759, cheap raw whiskey being repugnant because of its taste, 10667, 10669, though some people do drink it, 10669–10671. No particular alcoholic disease is attributable to raw whiskey, 10674–10676, 10742. Case of death from drinking feints, 10672, 10673.

Whiskey for medical purposes: Witness does not attribute any ill-effects to bye-products, but considers them valuable as a flavouring and for their dietetic properties, 10677–10683.

Whiskey as a beverage: The danger lies in over-indulgence, witness thinks it would be a great advantage to have a regulation measure, 10755-10757, distillers have expressed no opinion on this, 10760.

Materials used in the production of whiskey: Witness thinks these might be confined to cereal grains (excluding rice) saccharised by a diastatic ferment, 10692–10704, 10715–10726, 10743–10749, 10751, thinks that technological advance will be made in this, 10716–10719, 10750, but would rule out acid conversion which might introduce entirely new bye-products, 10720–10727, witness would make no restrictions as to method of distillation or use of yeast, 10752–10754.

Injurious effects of aldehydes; furfural in some drinks, 10727–10731.

Maturing of spirits: Witness thinks it important to use only old whiskey, chiefly on account of its flavour, 10720-10727, witness would make no restrictions as to maturing, 10690–10691, his experience in artificial maturation, 10732, its effect on whiskey and other spirits, 10733–10741.

Labelling: The difficulty of fixing a rule for this. Scotch and Irish whiskies should be distinguished, 10702–10714.

USHER, Sir Robert—

Is member of firm of Andrew Usher and Co., Edinburgh, established a century, 7689, 7690, agents for Glenlivet Distillery, and owners of Edinburgh Distillery, also director of Brackla Distillery, all pot still, 7691–7693.

After Islington case a meeting was held at which all interests affected were represented, and a deputation was appointed to wait upon the President of the Local Government Board and urge the appointment of a Royal Commission to inquire into the whole question, 7704–7719, 7885–7894.

Witness's definition of Scotch whiskey: Only whiskey manufactured in Scotland from cereals with a minimum proportion of 25 per cent. barley malt, 7780–7806, 8020–8029, which proportion should be insisted upon in the mash and verified officially, 7831–7834, 7848, 7871–7873. Witness would be prepared for possibility of restrictions on distiller using this mash, 7881–7884. Would preferably call Scotch patent still whiskey "Scotch Grain Whiskey," the pot still product "Scotch Malt Whiskey," and the blend "Scotch Whiskey," 8004–8008, 8044–8047.

If there were a less proportion than 25 per cent. malt in the mash, witness suggests selling it as spirit, 7849, 7850, 8027.

Labelling: Witness objects to compulsory labelling of Scotch whiskey. He considers it would do no good and leave an opening for fraud. They have their own registered labels which witness preferred not to discuss, 7843-7846, 7851-7866, 7966, 7967. Witness would prosecute under Merchandise Marks Act if a man sold a wrongly described whiskey, 7847.

Increase of Scotch whiskey trade in England after 1860. At first mainly pot still, afterwards blended whiskey as being less heavy, 7696–7702, 7720–7730.

Witness considers pure malt whiskey too heavy. Some was supplied after Islington case, but often returned by customers and changed for a blend, 7732–7739.

Export trade: Increased since 1880. Mainly blended. Little pure pot still and no patent still supplied, 7740–7749. Mostly in bottles. Blends sent out to suit demand. Specially labelled accordingly, 7938–7941.

Compulsory bonding: Witness considers a minimum of two years would be advantageous for both whiskies, 7809–7813, 7841.

Blending: Popularity of blended whiskey increased after brandy failure, 7920–7922. Average age of whiskey as used in blending. Limit put on age of youngest whiskey, 7945–7961. Mixture of British and foreign whiskies for home consumption not allowed, 7703. Witness can get proportions of blends from their books, 7902–7905. Careful examination and testing given by witness's firm during all processes of blending. Witness thinks stopping of blending not beneficial to public. Might cripple trade if minimum percentage of malt whiskey were insisted on, the supply meeting the varied demand, 7750–7766, 8003. Witness thinks similar blends are sold in England and Scotland of a light nature. Would not consider whiskey drunk by Army and Navy Stores' customers representative of English taste. Pot and patent still whiskey both improved by blending, 7767–7778, 7942–7944, 7998–8002. Witness objects to stating composition of blends, as verification would be extremely difficult, 7826–7830. All grain whiskey for blending purposes bought from Scotch grain whiskey distillers. Small trade in Irish whiskey, in Scotland, 7913–7919. Witness considers a blend lighter than a malt whiskey. A high-class blend would not necessarily contain larger proportion of malt. Loss of business by firms increasing proportion of malt, 7923–7929. Witness states that Glenlivet blended with grain whiskey was described as "Blended Glenlivet," 7835–7840. Several kinds of malts are used in blendng. Is against too high standardisation, which would be prejudicial to Highland distillers, 8014–8019.

Witness recommends an official system of invoicing and tracing, to obviate the possible substitution of Irish or English spirit for Scotch, 7896–7901.

Witness's firm sells all the product of Smith's Glenlivet (excepting North of Tay), 7907–7912.

Pot still whiskey was recently supplied by witness at the same price and age as blended whiskey, 7930–7937.

Analysis: Witness's poor opinion of analysts. Varied analyses of same whiskey, 7874–7880, 7962, 7963. Would not object to official Board of Reference, 7994–7997.

Witness suggests the withdrawal and complete revision of Excise regulations permitting the exportation of mixed British and foreign spirits, as this is never done, 7807, 7808, 7814–7825, the advantage in cost is counter-balanced by difference in the duty on foreign spirit, 7968–7971, with this suggestion he says the trade concurs, 8030–8043. Witness would like to use words "Blended in bond," in connection with foreign trade to show it had not been tampered with, 7972, 7973, not "Bottled in bond," this being too difficult to trace, 7974–7981. Witness approves of capsules on bottles as security, 7982–7985.

Witness objects to potatoes and beetroot being used in manufacture of grain spirits, 7986–7988.

Witness believes interference with present Scotch whiskey trade would benefit Irish distillers, 7989–7993.

Witness believes formerly much new whiskey was drunk, 8009–8011. Witness does not agree that pot still product is unfinished till aged, 8012, 8013.

Witness states that inspector's report in Western Australia, with reference to their O.V.G. Brand being a silent spirit, was incorrect, 7866–7870, 8048–8050.

VASEY, Mr. S. A., F.I.C.—

Is consulting chemist to the "Lancet" and a member of the Society of Public Analysts. He has had great experience in testing Cognac brandies, 17568–17571.

Definition of brandy: It should be a matured pot still spirit, obtained from the distillation of wine. Witness regards new brandy as unwholesome, and maintains that a minimum maturation limit of four to five years is necessary, 17577. He considers maturation a somewhat complex question, and thinks it is probably the oxidation of some secondary products of distillation, 17576–17578.

Patent still: Witness objects to this still, 17581. He would not accept such a product as brandy, 17582.

Chemical analysis of brandies: He is of opinion that analysis would be useful to differentiate brandy from highly rectified spirits like grain spirits, etc., 17593. An appreciable quantity of secondary products in the spirit obtained through the patent still is to be expected, 17595–17599. He admits a wide variation in the composition of the secondary products as published by the French Technical Committee of Œnology, 17600. The ether standard, provided that it can be considered in combination with other constituents, may be taken as a very fair criterion of a pot still brandy, 17608, 17609. Witness has analysed a large number of Cognac brandies, 17610. The uniformity in the composition of these is very remarkable. He thinks that it would help very considerably if the distillers would make use of chemical analysis themselves and keep some record of the batches of brandy they send out, by means of marks, 17620. The methods at present in vogue among chemists are too diversified for obtaining uniform results, 17622–17624. The samples he receives are generally of proprietary articles, and occasionally samples are taken on the market for purposes of comparison, 17670–17672. He is not limited as to the quantity of spirit available for analysis, 17673. He has on hand a number of analyses obtained by identical methods for comparison with the merchants' statements regarding same. He can also have the assistance of a taster, 17676–17679.

Formation of a Court of Reference: He thinks this is desirable, 17626, 17627.

VELEY, Mr. Victor H., D.Sc., M.A., F.R.S.—

Was retained by the Borough of Kensington in an appeal case under the Sale of Food and Drugs Acts, 16288. Witness has had considerable experience with cases arising under the Merchandise Marks Acts, 16252, and has written papers on higher alcohols and methods adopted for determining other constituents of potable spirits, 16253, 16254.

Brandy: First described by Marcus Graecus in the eighth century, 16256, 16257; later by Abulkasin, 16257, and in the fourteenth century by Arnaud de Villeneuve, who called it "aqua vitæ," "eau-de-vie," or "eau d'Immortalité." In the fifteenth century the manufacture became general, especially in Italian monasteries, where, sweetened and aromaticised, it was exported as "Liquor" or "Rosoglio," Catalonia and Herault also contributed as well as the Charente, this afterwards becoming the most important. The consumption increasing, free imbibing was repressed, 16258. Witness defines brandy as a preparation by fractional distillation of wine only, obtained from grape, in a pot still, or a modification thereof, and properly aged and matured,, 16258. "Cognac" is a specific term for the product of that district, but wine spirit is not limited to any locality, 16259, 16260. The patent still, used to expel the "terroir" flavour, is chiefly used in districts of inferior brandy, 16265–16268.

Analysis: Witness considers the ether standard no guarantee of genuine brandy, 16288–16296. In his opinion, after experimentation, the 80 standard was too low and should be 90 at least, 16297–16304, 16313, 16314. He gives figures for a reasonable standard of the total secondary products, 16305, 16306. He holds as high an opinion of the value of tasting in judging as of analysis, 16306–16309, and would like to have the professional taster more recognised by the Government, 16310–16312. He approves of the Belgian standard, which differentiates between toxic and non-toxic substances in spirits, limiting the amount of the former to not more than three grammes per litre, 16315–16326, the toxic substances comprising higher alcohols, aldehydes, and esters, 16316, 16320, 16323, 16368–16371. This standard permits a toxic value of about 10 per cent. over and above that of the ethyl alcohol present in that spirit, 16325, 16326, 16370–16372. Discussion, 16373–16383. He considers there should be more uniformity in analytical processes, which should be definitely settled by a competent authority, 16328–16331. Total acidity should be separated into two factors, the volatile and fixed acids, 16332; witness describes his methods, 16333, 16334. He has carried on a large amount of work upon measurements of colour reactions for aldehydes and furfural, 16325, 16339-16343, and has devised a perfected form of instrument for the purpose of these determinations, 16335. Isobutyl sulphuric method is rarely used now, witness having demonstrated that discolouration is due to impurities in the isobutyl alcohol, 16336–16338. In his opinion the chloroform extraction method, though giving some satisfactory results, possesses disadvantages of principle and practice, 16344, 16345. He considers there is room for improvement in detail with other colour tests, 16345. Depending on the kind of brandy there is no experimental evidence to show that brandy is more toxic than its content of ethyl alcohol, 16390–16394; a particular brandy investigated was equivalent to its ethyl alcoholic contents in toxic properties, 16384–16395. Witness would like some restriction placed upon the addition of œnanthic ester in any spirit which might be sold as brandy, 16392. Toxicology should be further investigated, 16396–16402.

British or imitation brandies: These are neutral or silent patent still spirits artificially flavoured, 16260, and were first described in Ure's Dictionary of Arts, 1839. Witness describes these flavourings, 16269–16271, 16350, 16351, which are of German origin, 16272, 16273. He also explains the process from Hartleben's "Praktische Destillateur," 16275. He hands in samples of an artificial essence made in Cognac, 16274–16286, and one made in Germany and analysed by Polenski, 16274, 16286, containing an excessive amount of esters, 16252, demonstrating the use of artificial essences, 16353, 16360–16363. Marc brandy is often used for addition to inferior spirit to raise the proportion of esters, 16358, 16359. Witness considers these imitations are injurious, 16276-16284. British brandy should be so labelled, 16260. He mentions proceedings under Merchandise Marks Act against a case of fraudulent sale, 16260, 16261.

VIRTUE, Mr. William—

Has been Managing Director of the United Distilleries Co., Ltd., Belfast, since its formation in 1902, 4691, 4692; was previously Managing Director of David Watt and Co., Ltd., Londonderry, for twelve years, 4693. Present company includes Irish Distilleries, Ltd., Avoniel Distillery, Belfast, and David Watt and Co., Ltd., Londonderry, 4694, and owns both pot and patent still distilleries in Belfast and Londonderry, 4695–4699, 4702. The company sell chiefly to wholesale merchants and blenders, 4742, 4743, according to public demand, 4745, casks usually bear name of distillery, and in some cases brand is known to consumer, 4738–4741, 4747, 4930.

Distinction between Scotch and Irish whiskey: Is broadly in the peat flavour of the Scotch, which is wanting in the Irish, 4836, 4837. Two distilleries in Coleraine and one in Bushmills use "all-malt" mash, which causes approximation to Lowland Scotch whiskey, 4838–4840.

Definition of whiskey: According to witness, is a spirit made from any cereals from any country and saccharised by malt, 4873–4875; rice might be permitted, but not likely to be used, 4876.

Pot still whiskey: Pot stills run for only six months, it being more profitable to work in cold weather, owing to questions of malting, water for cooling purposes and disposal of draff, demand for which is greater in winter, 4708–4710, 4770. Production is about 250,000 gallons, and is equal to the demand, 4700, 4711. In Ireland there are three distillations, against two in Scotland, 4771–4774; the third distillation produces a more highly rectified and purer spirit, 4775, 4776. Heads of stills recently enlarged to expose larger cooling surface, thus the less volatile constituents flow back into the still, 4779.

Patent still whiskey: Witness attributes the preference for patent still (of which five to six million gallons are produced yearly) to public taste for more mildly-flavoured whiskey, also to price, 4700–4707, 4712,

4770, 4851-4857, 4934, 4935, 4942-4945; demand has steadily increased since introduction, 4834, 4835. Coffey still was patented in 1831, and used in 1833, in their Abbey Street Distillery, Londonderry, 4782–4787, 4789, 4790, since when it has been continuously used, 4791, 4792, 4931, 4932; other patent stills were then operating in Cork, in Dublin in 1838, and in Dundalk in 1848, 4933. Product was probably sold unblended and immature, 4936-4938, 4940. Pot still process was discontinued on erection of Coffey still, 4788. The product of the Coffey still has been denominated "whiskey" since its inception, under various heads, 4793–4801, 4846–4850, and is recognised in the trade as "whiskey" throughout Ireland, but sometimes termed spirit, 4847, 4893, though retailed in Belfast and Londonderry as "whiskey," 4849. Retailers and public indifferent to diversity in pot and patent stills; large retail trade done in Londonderry and North-west in both classes; as in Scotland, class of whiskey differs with distilleries, 4851–4859. Introduction of maize malting in their distilleries, probably in 1863, but doubtless it had been previously used unmalted, 4860-4865.

Comparison between pot and patent stills: Ireland contains twenty-five pot and nine patent stills, and unblended or self-whiskey is more easily obtainable, and more consumed there than in England or Scotland; exports for these passing chiefly through Belfast blending houses, 4744, 4753–4769, 4894–4902, 4925–4929. Pot still whiskey varies, but is much stronger in flavour than patent still or blend, 4713, 4751, 4752, 4881, owing to the greater quantity of bye-products, 4714, 4880. A difference in the grain influences the flavour to a greater extent in pot stills, 4715, 4716, ingredients differ, but stronger qualities in pot still not attributable to this, 4717, 4718, same ingredients occasionally used in both stills, 4715, 4716, as in Cork, this produces a whiskey unlike any other in Ireland, 4843, 4887, does not know whether it is sold unblended, 4941. Company use nothing but grain in their distilleries, 4872. Materials for pot stills are barley malt, barley, and occasionally a little rye, wheat or oats; Company have used maize, but not frequently; in patent stills roughly one-third barley malt, one-third rye, and one-third maize, but no unmalted barley, 4719–4723, 4841–4845, 4870, 4871. Distinction with regard to maize is owing to the necessity for maintaining uniform standards of flavour through uniform ingredients; maize was not used when pot still standards were established, 4724, whereas difference of process favours patent still by allowing less flavour to pass over, and a larger alteration in materials, 4725–4727. Average excess in cost of production of pot stills about 2½d. per proof gallon, 4728–4735, partly owing to use of patent still bye-products, 4975-4979. The only division in Irish trade is between pot and patent still, 4736, 4737. Water affects flavour of whiskey, 4877, 4878; pot still distiller has greater opportunities of dealing with flavours than patent, 4879, on account of more thorough distillation, and advantages in altering proportions and materials, 4880, 4882. An expert could discriminate between pot and patent stills by taste, 4883, also to great extent could discern shades of taste consequent upon varying percentages, 4884–4886; average consumer would probably notice difference from strong pot still, 4888–4893. There is no doubt that the pot still is a fractionating process, 4946–4949, but patent still is more powerful, 4951, 4952. Witness is satisfied that not all the volatile impurities appear in finished product, 4950. All Irish stills use charcoal for oxidation, 4780, 4781, 4953, 4954; alkali also used to decompose the compound ethers, 4953, 4955; and also soap to prevent frothing, 4956, 4957; this would cause decomposition of acids in the wash somewhat similarly to alkalies, 4958, 4959. Yield of proof spirit about 5½ to 5¾ gallons per cwt. of materials used, 4962–4964, maize yield is occasionally seven gallons, 4965, 4966. Cost of barley, including in-leak, 7s. 2d. per cwt., in-leak equals about 25 per cent., 4967–4971, thus 192 cwts. of malt cost £86; bye-products (grains, yeast, etc.) not considered in estimations of cost, 4972–4974. Fusel oil not separated in pot still, 4980, 4982; it was collected from patent still in 1858, 4866–4869, 4981, which would indicate the malting of maize in that year, 4868.

Blending: The company do no blending themselves, 4928; it is usually done with whiskey from various distilleries, 4748, 4805, 4806, to meet public taste, 4749, and makes a good whiskey, 4750, 4751. Witness thinks there was not much blending in Ireland before introduction of Coffey still, 4802, 4803, pot still whiskey being then very crude, little was matured; he considers patent whiskey was blended with it to render it more potable, 4804; blending is undertaken wherever characters of the whiskies differ, 4807.

Maturation: This is more important to the pot still product than to the patent owing to its greater crudity, 4752, 4811, 4812. Profits to distillers are greater on matured whiskey, 4913. Witness thinks introduction of patent still was cause of pot still distillers bonding until maturity, and also led to third distillation in order to make it more palatable when new, 4810, 4939; very little bonding done at the time of its introduction, is now considerable, 4808, 4809. Witness considers the question of compulsory bonding entirely a matter of public health, which should be decided by competent authorities; if this requires maturation, distillers should be compelled to bond, but he does not think this has been clearly proved, 4813, 4814, 4829, 4831–4833, 4903–4906. Necessity for an accepted definition capable of proof for each class of whiskey, before fixing arbitrary periods, in order to avoid injustice to certain distillers, 4907, 4908. Witness is aware of no difference between new and old whiskey, besides that of taste, 4814; he does not think the trade regards new whiskey as injurious, but knows the public does, 4815; he does not think so himself, 4816. Very little pot still on the market under three years; patent still whiskey is often consumed within a few months of distillation; this is, at one or two years of age, as mature as pot still of four or five, 4817–4819. Whiskey for maturation is kept in bond, 4820, 4821, most frequently at the distillery, and is under Excise supervision until payment of duty, which is sufficient guarantee of age for the public, 4822–4827, as duty is never paid until whiskey goes into consumption, 4828. Witness explains gravitation of trade opinion since Select Committee of 1890–1891, towards compulsory bonding, by their wish to meet public demand for guaranteed mature whiskey, 4911, 4912, 4922, also in Scotland at that time stocks were inadequate and warehousing accommodation lacking, 4913, would now be obviated through the erection in 1897–1899 of warehouses to accommodate overproduction, 4914, 4915. Witness thinks that the stock in hand in Scotland is generally sufficient to meet demands of compulsory bonding for two or three years, 4916, 4917. In Ireland, patent stills have no redundant stock, 4918–4920; pot stills have probably sufficient, as bonding is already extensive, whiskey being unfit for consumption until matured, 4921, 4922. Witness's attitude represents that of the trade generally, 4923, and agrees with the consensus of evidence before Committee of 1890–1891, 4909, 4910.

WALKER, Mr. Alexander—

Is managing director of John Walker and Sons, Limited, 7045, blenders and distillers, 7120, supplying retailers and publicans, 7173, carrying on business with Scotland, England and Sydney, 7046; owning two distilleries at Cardow and Annandale, 7047–7049. Witness's firm has an interest in several other pot and patent still distilleries, 7050, 7199. Has had twenty years' experience, 7198. Witness has read evidence tendered to the Commission, and has also attended meetings of his Association, 7051, but wishes to express his personal views, 7052, which may not accord with others, 7053.

Definition of Scotch whiskey: To be so called, it should contain 50 per cent. pot still malt whiskey, because the characteristic of this, as known, is only got in the pot still, 7054–7057, 7063, 7075, 7091, 7208, 7209. Discussion on this, 7054–7091, 7098–7100, 7174, 7175. This should be made from cereals, 7193, from a mash containing 30 per cent. minimum of malt, 7123, 7124, 7160, 7161, this being the present proportion, which is quite satisfactory, 7187–7193, which should be controlled by occasional measurement by Excise officers, 7187–7193. Prejudice against the use of rice, owing to the spirit produced, 7194–7196.

Compulsory bonding: Witness in favour of this for potable spirits; suggests two years for both pot and patent still, 7101–7103, 7138, 7139; this in the interests of the consumer, 7206. New spirits throw off a kind of ether, which is injurious to consumer; this disappears with ageing, 7104, 7105, 7211–7213. This also apparent with new wine—Claret and Bordeaux, 7106–7109. This bonding either to include spirits

made into gin and other compounds, or, failing this, an extra duty of 6d. per gallon to be imposed, 7136. This would not refer to manufacturing chemists, who might obtain spirits duty-free, 7137.

Blending: Question whether this is simply dilution or something more, 7140–1, 7210. Change in public taste has increased the sale of blended whiskey, pot still alone being too full flavoured, the addition of patent still making a lighter whiskey, 7092–7097. Witness in favour of blending, 7151, owing to the difficulty of selling a single whiskey: (*a*) because of its enormous variation even in the same distillery, 7142, 7143; (*b*) pot still mixed with water causes turbidity, to which public objects, 7144–7149, even though this is a test of its excellence, 7150. Witness would limit the proportion of grain spirit used, 7152. Witness's firm blends in three qualities and ages, 7121, 7122, which are proprietary whiskies, each sold in bottles with distinctive labels, 7162, 7163. Instances of supposed tampering have been checked by witness; partly by taste, partly owing to their goods being standardised as to proportions of malt and colour, 7164–7167, the latter being easy to effect, 7186. Chemical analysis has been utilised both here and in the Colonies, 7169, though not analyses of similarly tasting whiskies, 7170, 7172. Witness does not think it possible to show a concurrence of judgment drawn from analysis and taste of an exactly similarly tasting whiskey, 7171. Witness's firm blend on their premises, 7179. Publicans occasionally mix whiskies to reduce strength, though this is rarely done, 7183. Witness would prohibit it altogether, and the penalties would be too great to run the risk of so doing, 7218, as in the case of misdescription, 7185, 7186, 7219, thus a control could be kept on the whiskey sold to publicans, 7185. Discussion on this, 7218–7224. When public taste inclines to a softer whiskey, as it now does, witness uses a pot still giving fewer secondary products, and does not soften whiskey by adding more patent still, 7200–7203. This limit of 50 per cent. patent still would thus never be exceeded, 7204, 7205.

Blending in bond: Witness does no blending in bond, 7180. He cannot tell whether firms keep an exact record of the whiskies blended, 7181, but presumes this is done in their stock books, 7182. Provided a 50 per cent. minimum limit of malt whiskey was arranged for in Scotch whiskey, witness considers description and labelling could be easily checked by the Excise officers in the bonding warehouse, 7176–7178. This would make alteration of standardisation by blenders in bond difficult, especially if a large penalty were inflicted, or a man's licence or trade were affected, 7179.

"Ethery" whiskey: Witness believes this ether is due to a mistake in fermentation, 7214, which is injurious, 7215, and not agreeable, 7216. Witness does not know if it be due to the formation of "formyl alcohol," 7217.

Patent still product: This should be sold as grain whiskey or Scotch grain whiskey, not Scotch whiskey, 7110–7119, 7128. This is to protect the reputation of Scotch pot still whiskey, the prestige value of Scotch whiskey in foreign countries being an enormous asset of Scotland, which would be endangered if grain spirit were sold as Scotch whiskey, 7129–7131. When it is pure grain, it is very cheap, and is sold to the very lowest class of trade, 7114, 7115. Witness is in favour of legislation to prevent grain whiskey being sold at the same price as a very high class whiskey, 7116, 7117.

Definition of pot still: Witness considers this as a still heated by direct fire, not steam, 7132, 7133, as he has not, from comparison, seen the essential flavours which he considers requisite, in a still heated by steam, 7134, 7135. He considers the term "Malt Whiskey," which is well understood, a sufficient protection, 7154, 7155.

Irish whiskies: Witness only has slight experience of these, but imagines they require blending in the same way as Scotch whiskey, 7156–7158. He thinks there is practically no difference in flavour between Irish and Scotch grain spirits, 7159.

WALTER, Mr. Arthur J., K.C.—

First appeared with Mr. Fletcher Moulton for the Defendants in the Islington case at the police court, 933, and afterwards as leading counsel at quarter sessions, 934; though nominally appearing for Wells and Davidge his real clients were patent still distillers in Scotland and Ireland, 935, 6.

At the police court Mr. Fordham convicted, 943, but on appeal to quarter sessions the magistrates were divided, 944, so the appeal was respited, 945, and in consequence of this Commission has not been renewed, 946-948. Dr. Teed was the only strictly expert witness called on behalf of prosecution at the police court and also at quarter sessions, 949-951; remaining evidence at police-court consisted of pot still distillers and a few members of the public, 952–954. More evidence was taken at quarter sessions on both sides, 956, especially by defence, who called more trade evidence, 957.

Case for prosecution: Contention was that both defendants had sold, to the prejudice of the purchaser, an article not of quality demanded, 937; the certificate of the public analyst stated that whiskey should contain 380 parts of impurities per 100,000 of absolute alcohol, 939-41, though there are many Scotch pot still whiskies which do not reach this standard, 1062–1067. Prosecution also alleged that patent still spirit was a "Silent" or rectified spirit, whereas this cannot be obtained from patent still without a further chemical process to separate bye-products, 1023–4. Prosecution stated that in patent still the feints and foreshots were separated and the intermediate product alone taken for whiskey, while this is actually not done, but they are retained in a similar way to the pot still, 1068-1072.

Case for defence: Irish whiskey can only be made in Ireland and Scotch whiskey in Scotland, 958, 964, 1097–8. Definition of whiskey as taken by defence is "a spirit distilled from a mash of cereal grains saccharised by the diastase of malt," and neither molasses, potatoes nor anything else but cereals must be used, 959, 963, 964, 1095–1097, 1099–1101, 1105–6, and conversion must be made by malt only, 964–5, 1025–1027. Proportions necessary, 1028–1030. No other product could be called "Whiskey," 966–7. This definition is a matter of history, 1107. "Whiskey" designates all of this product not made in Scotland or Ireland, 968–970, including Bourbon whiskey, 971. "Cereals" include barley, wheat, oats, rye, maize, 972; rice was not mentioned at all, 973, but would not be included under cereals, 1099–1104.

Maize: Defence contended that maize had been used for 50 years, and so could not be called a substitute in preparation of whiskey, 960, 962, and is now used in one pot still distillery, 961. Proportion of maize used—75 per cent. is a large, but not very unusual proportion, 1029–1030.

Defence further contended with regard to preparation of "Whiskey" from cereals that the difference between the pot still method and patent still method was one of degree and not of kind, 977, 1031–1034; that the production of "bye-products" or impurities was same in both, but proportion of them was less in patent still than pot still owing to more perfect apparatus, 974–977, 982, 1060–1061, 1073–1076. No direct evidence was given to show that, by adjusting spirit plate or otherwise, patent still could produce article with flavours and characteristics of pot still, 1035–1041.

Blending: Defence called several blenders who testified as to the antiquity of the practice and objected to putting proportion of blends on label as this was a valuable trade secret, 1000. Moreover, these witnesses said that patent still whiskey matured in the same way as pot still, but in a shorter time, 1000–1002, 1091–1094. Blending is not a mere dilution, but on the proportions used depends the flavour, etc., of the particular brand of whiskey, 1000, 1003, 1042–3, while in what is called Scotch whiskey there are many different flavours all sold under this name, 1005, which a whiskey drinker could easily detect, 1006.

Result to consumer is that patent still whiskey has all the characteristics of whiskey but in a milder form than pot still product, 983–986, 1051–1052. Patent still product was sold and recognised as whiskey before the Food and Drugs Act came into force, 1059.

Relative expense of pot and patent still methods: (1) Mash: cost of this is on an average same in both methods, 991, 1077–1080. (2) Patent still is a continuous process while pot still is only intermittent so for same capital expended patent still much cheaper than pot still, 992. (3) Cost of coal and labour in pot

still is double what it is in patent still, 992–995. Difference in distillers' price to retailers: Witness will not attempt to give this, 996–999.

Patent still distillers do not object to labelling their products accordingly, or to stating on label that it is a blend of pot still and patent still, so long as they are called "Whiskey," 1007–1010. Owing to reblending of blends it would be difficult to give names of distilleries whence the retailed product came originally, 1011–1014. No objection to stating age in case of unblended whiskey, 1014, 5. Difficulties of stating the materials of mash on label, 1016, 7.

Pure pot still spirit seldom asked for but pure patent still (Cambus) is sold largely at a higher price as "Special," 1017, 8, 1081–1087.

Health and patent still products: Dr. Andrew Luff gave in evidence that he preferred patent still to pot still owing to its smaller proportion of furfural, which has a toxic effect, 1089, while Dr. Tatlock dosed himself with the neat bye-products of pot and patent still whiskey with no ill-effects from either, 1090.

Coffey still patent would have been a good patent, 977–979. Defence contended that improvements in pot still are tending to make it more and more like patent still, 980.

Witness does not know of anyone in the trade who would wish to include in the definition materials other than cereals, 1111–1115.

WILSON, Dr. John T.—

Witness is medical officer of health for Lanarkshire, 18291. He believes that the Lanark County Council was the first to take action under the Sale of Food and Drugs Acts in respect of brandy. The action was prompted by the report of the "Lancet" Commissioner, which was carefully considered by witness in conjunction with the county analyst, 18298, 18299, 18333. The Court gave decision in favour of the council, the defence being that brandy should only be considered as regards taste, appearance and smell, without reference to grape origin, 18304. Since that case brandy has been included systematically, year by year, in the samples taken under the Sale of Food and Drugs Acts, 18310, and recent analyses have shown a great decline in the number of cases of adulteration discovered, 18320. The trade is generally sympathetic with the council's action, 18329.

If the definition of brandy stops short of emphasising grape origin and has no regard to distillation, one may have a plain spirit derived from the grape, 18356. It is desirable to have a pronouncement from some authoritative committee, 18361.

YULE, Mr. John—

Is partner of Messrs. William Yule & Sons, wholesale grocers and wine merchants, Kirkcaldy, 5905, 5906, where this firm has been for forty years, for eighteen of which witness has been with them, 5907, 5908. Their trade is mostly in liquor and is wholesale, though some retail trade is done, 5911–5916. Witness is in touch with his customers who do not buy direct from distilleries, nor entirely from his firm, 5917–5921, so that there is entire freedom of trade between them, 5922–5924. Firm sells Highland malt, Lowland malt and grain whiskies, 5925. Amongst latter are Cameron Bridge, North British, Cambus and Caledonian, 5926; Cambus is made in Alloa, Cameron Bridge in Fife, 5927–5930. Witness's firm sends a little whiskey to London, though most of their trade is in the Fife district, 5962, 5963.

Public taste in whiskey: About 10 per cent. of whiskey supplied is pure malt and rest is patent still or grain whiskey, 5931–5934. Witness thinks that public taste is tending towards a softer whiskey, 6033, 6034, which is usually a blend with a very large proportion of grain whiskey, 5980. Taste in Fife is certainly for this, 5935, 5980, though, perhaps, it is rather more in favour of grain whiskey than average, 5981. Witness does not think this is due to their occupations, 5938. There are three malt distilleries and one grain distillery in the district, 5936, 5937, 5939, though the latter produces more than combined output of the others, 5940–5943. Nineteen out of twenty publicans and retailers keep pure grain whiskey and sell blends chiefly composed of it, 5944, 5978, 5979. They would not like one in which the malt predominated, and which would be a little more expensive, 5953–5958. Whiskey is always asked for as such, the term "Spirits" has practically gone out of use, 5945–5952. If Highland whiskey is asked for, a blend, largely composed of malt, is given, 5982–5985. Neat whiskey is not much drunk now, and witness could not say what whiskey was used for this purpose, 5993, 5994.

Prices of whiskey: Malt whiskey, both Highland and Lowland, can be bought fairly cheaply at present, owing to overstocking, its price is 2s. 6d. to 3s. a proof gallon, at five years old, 5966–5970, 5986, 5990–5992, 6020, 6021. Some grain whiskies are more expensive than malts, 6002, 6004, 6022, 6023. Their usual price is about 1s. 10d. per proof gallon, at between two and three years old, 5988, 5989, 6019. Blend sold to working classes is cheaper, though quite as wholesome for them, 6004, 6005. Percentage profit is same for all whiskies sold, 6007.

Blends: Witness's most popular blend contains one part of malt to seven of grain whiskey, 5959, 6031, 6032. The small proportion of malt added gives flavour and individuality to the blend, 6008, though it makes it a little more expensive to both buyer and seller, 6009. Customers do not like a large percentage of malt in blends, though some with 60 per cent. to 70 per cent. are kept, 5960, 5961.

Maturation: Two years is necessary for grain whiskey, 5964, while Highland malt takes at least five years, 5965. Old patent still whiskey is mellower, more delicate in flavour, and softer than new whiskey. It is of much greater value, 5995–6000. Witness thinks that new whiskey would have a bad effect on anyone not in good condition, 6001, 6010–6012. As doctors in Fife always advise old whiskey, witness thinks it must be superior, and though he has never experimented on himself, he could tell the difference between old and new whiskey, 6013–6018.

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